# GPSMAP® 4000 Series

## owner's manual

GARMIN™

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# INTRODUCTION

This manual includes information for the following products:

- GPSMAP® 4008
- GPSMAP® 4208
- GPSMAP® 4012
- GPSMAP® 4212

## Tips and Shortcuts

- Press **HOME** from any screen to return to the Home screen.
- Press **MENU** from any of the main screens to access advanced settings.
- Press and release the **POWER** key to adjust the display settings.

## Manual Conventions

In this manual, when you are instructed to select an item, press the **SOFT KEY** along the right side of the screen to select each item. Small arrows (>) in the text indicate that you should press the **SOFT KEY** for each item in order. For example, if you see "select **Charts** > **Nav Chart**," you should press the **SOFT KEY** next to **Charts**, Then press the **SOFT KEY** next to **Nav Chart**.

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- Using the Navigation Chart: page 7.
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## Warnings

**Failure to avoid the following potentially hazardous situations could result in an accident or collision resulting in death or serious injury.**

- When navigating, carefully compare information displayed on the unit to all available navigation sources, including information from visual sightings, and maps. For safety, always resolve any discrepancies or questions before continuing navigation.
- Use the electronic chart in the unit only to facilitate, not to replace, the use of authorized government charts. Official government charts and notices to mariners contain all information needed to navigate safely.
- Use this unit only as a navigational aid. Do not attempt to use the unit for any purpose requiring precise measurement of direction, distance, location, or topography.

**WARNING:** This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is provided in accordance with California's Proposition 65. See www.garmin.com/prop65 for more information.

**Hg - LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE, OR FEDERAL LAWS.**

For more information go to:
www.garmin.com/aboutGarmin/environment/disposal.jsp.

## Important Information

**MAP DATA INFORMATION:** One of the goals of Garmin is to provide customers with the most complete and accurate cartography that is available to us at a reasonable cost. We use a combination of governmental and private data sources, which we identify in product literature and copyright messages displayed to the consumer. Virtually all data sources contain some inaccurate or incomplete data. In some countries, complete and accurate map information is either not available or is prohibitively expensive.

The **California Electronic Waste Recycling Act of 2003** requires the recycling of certain electronics. For more information on the applicability to this product, see www.erecycle.org.

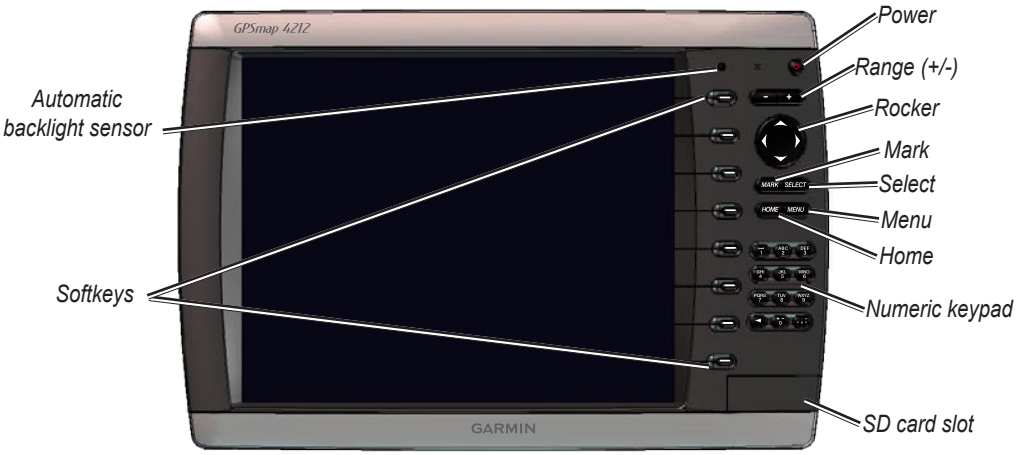
# GETTING STARTED



## Unit Overview

To turn on your unit for the first time, you will be asked to specify certain settings. For details, see page 62.

## Front and Rear Panels




**Front - GPSMAP 4212 shown**

**NOTE:** The GPSMAP 4008 and 4208 do not have a numeric keypad.

**NOTE:** Use the softkeys to navigate the menus on the GPSMAP 4000 series unit.

**GPSMAP 4212 shown - Back**

## Power/Backlight

Press and hold the **POWER** key until the Garmin screen appears. When the Warning screen appears, press **SELECT** to agree to the warning and proceed to the Home screen.

**NOTE:** The first time you power on your unit, you must go through a setup sequence. See page 62 for details.

To turn the unit off, press and hold the **POWER** key.

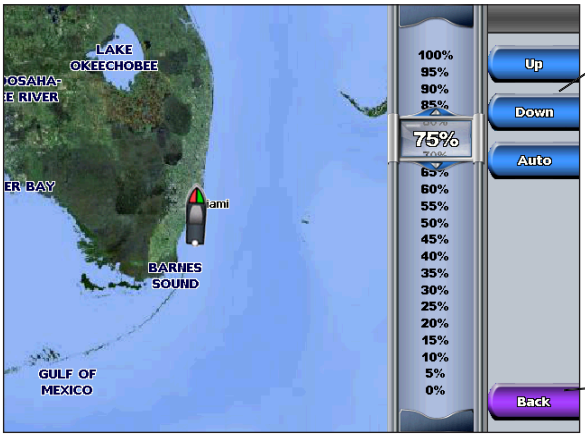
GARMIN
WARNING
All information is presented for reference only. You assume total responsibility and risk associated with using this device.
I Agree
SELECT

**Warning Screen**

**Home Screen**

### *Adjusting the Backlight*

1. Press and release the **POWER** key.
2. Select **Backlight**.
3. To allow the unit to automatically adjust the backlight based on ambient light, select **Auto**.




*To manually adjust the backlight, either select* **Up** *or* **Down**, *or use the* **ROCKER**.

*To return to the previous screen, select* **Back**.

### *Adjusting the Color Mode*

1. Press and release the **POWER** key.
2. Select **Color Mode**.
3. Select **Day**, **Night**, or **Auto**.
   - Day colors are brighter and easier to read in sunlight, night colors are darker and more subdued. The auto setting switches between day and night colors at sunrise and sunset (based on almanac data).

## Acquiring GPS Satellite Signals

When you turn the unit on, the GPS receiver must collect satellite data and establish its current location.

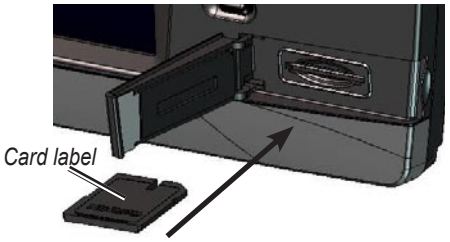
When the unit acquires satellite signals, the signal strength bars at the top of the Home screen are green . When the unit loses satellite signals, the green bars disappear and a flashing question mark is displayed on the boat icon (on the chart screen).

For more information about GPS, visit the Garmin Web site at www.garmin.com/aboutGPS.

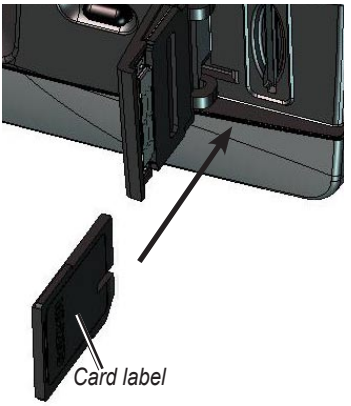
## Inserting and Removing SD Cards

Your unit supports Secure Digital (SD) cards. Insert optional BlueChart® g2 Vision™ SD cards to view high-resolution satellite imagery, and aerial reference photos of ports, harbors, marinas, and other points of interest. Insert blank SD cards to transfer data such as waypoints, routes, and tracks to another compatible Garmin unit or a PC. The SD card slot is located on the bottom-right corner of the unit.

To insert the SD card, open the access door and press the SD card in until it clicks.




GPSMAP 4012 or 4212




GPSMAP 4008 or 4208

To remove the SD card, press in on the SD card. The card pops out.

For more information on BlueChart g2 Vision, see page 14.

For more information on transferring data, see page 31.

## System Settings

The following paragraphs describe how to view system information, restore factory settings, and use the simulator mode. For a more detailed description of system settings, refer to page 35.

### *Restoring Factory Settings*

You can restore your unit to the original factory settings.

**CAUTION:** This procedure deletes any information you have entered.

**To restore factory settings:**

1. From the Home screen, select **Configure** > **System** > **System Information.**
2. Select **Factory Settings**.
3. Select **Reset** to restore all factory settings. Otherwise, select **No** to cancel.

### *Viewing System Information*

You can view your unit's software version, basemap version, unit ID number, and your XM weather Radio ID (if available). You may need this information to update the system software or purchase additional map data information.

From the Home screen, select **Configure** > **System** > **System Information**.

### *Using the Simulator Mode*

Simulator mode turns the GPS receiver off for use indoors or for practice. The unit does not track satellites in simulator mode.

**CAUTION:** Do not try to navigate using simulator mode because the GPS receiver is turned off. Any satellite signal strength bars shown are only simulations and do not represent the strength of actual satellite signals.

#### To turn on Simulator Mode

1. From the Home screen select **Configure** > **System** > **Simulator**.
2. Select **On** to turn the simulator mode on. Select **Setup** to set speed, track control, position, simulator time, and simulator date.

## Understanding the Home Screen

Use the Home screen to access all other screens.

**NOTE:** Options on this screen vary based on the unit type.

- **Charts**—access Navigation, Mariner's Eye, Mariner's Eye 3D, Fish Eye 3D, Fishing Charts and Radar Overlay charts (page 7).

**NOTE:** Mariner's Eye 3D, Fish Eye 3D, and Fishing Charts are available only if you use a BlueChart g2 Vision SD card.

- **Radar**—setup and view radar (page 43).

**NOTE:** The radar option is available only if you have a Garmin Marine Radar connected.

- **Sonar**—access sonar information (page 49).

**NOTE:** The sonar option is available only if you have a Garmin sonar module connected.

- **Weather**—setup and view various weather parameters, including precipitation, forecast, fishing, sea conditions, and visibility (page 53).

**NOTE:** The weather option is available only if you have a Garmin XM Weather module connected.

- **Combinations**—set up the screen to view a chart, sonar, radar, and video in a two or three field split screen (page 21).
- **Where To**—access navigation features (page 23).
- **Information**—view information including tides, currents, celestial data, user data, information about other boats, gauges, and video (page 29).
- **Configure**—view and edit unit and system settings (page 35).

# USING CHARTS

The GPSMAP 4008 and 4012 units have a basic worldwide imagery map, and the GPSMAP 4208 and 4212 have built-in detailed BlueChart g2 cartography for the US shoreline.

- **Navigation Chart**—displays all relevant navigation data available on your preloaded maps, including buoys, lights, cables, depth soundings, marinas, and tide stations in an overhead view.
- **Mariner's Eye**—a view from above and behind your boat for a visual navigation aid.

**NOTE:** If you are using a GPSMAP 4008 or 4012, you must insert an optional BlueChart g2 Vision preprogrammed SD card to view detailed Navigation and Mariner's Eye charts.

Fishing Charts and Fish Eye 3D views are available when using optional Blue Chart® g2 Vision™ preprogrammed SD cards (See page 14).

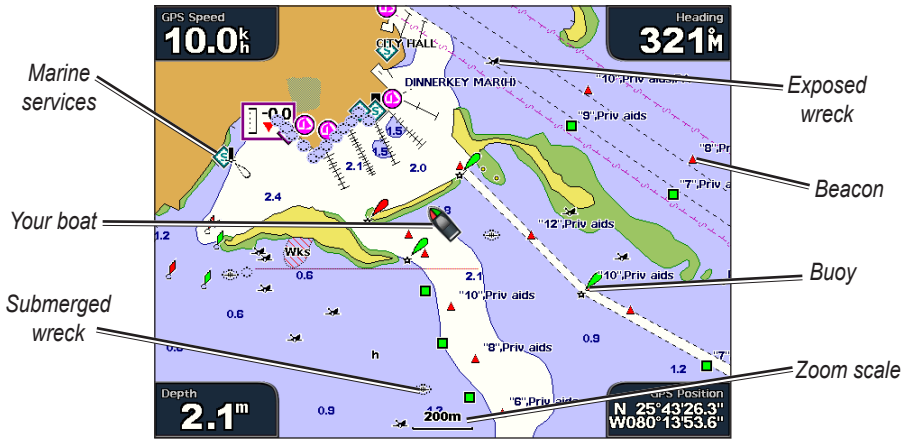
- **Fishing Chart**—removes navigational data from the chart, while enhancing bottom contours for depth recognition.
- **Fish Eye 3D—**an underwater view that visually represents the sea floor according to the chart's information.

## Using the Navigation Chart

Use the navigation chart to plan your course, view map information, and as a navigational aid.

**NOTE:** For GPSMAP 4008 or 4012 units, you must insert an optional BlueChart g2 Vision preprogrammed SD card for your region to view detailed navigation charts.

To access a navigation chart, from the Home screen, select **Charts** > **Navigation Chart**.




**Navigation Chart on a GPSMAP 4208**

### *Zooming In and Out on the Map*

The **Range (+/-)** keys control the zoom level, indicated by the scale at the bottom of the navigation chart ( 120m ). The bar under the number represents that distance on the map.

## Navigation Chart Settings

To access additional settings or options for the navigation chart, press **MENU**.

**Weather**—turns the NEXRAD weather overlay on or off. This choice is only available when a Garmin XM Network device is connected. See page 53 for more information.



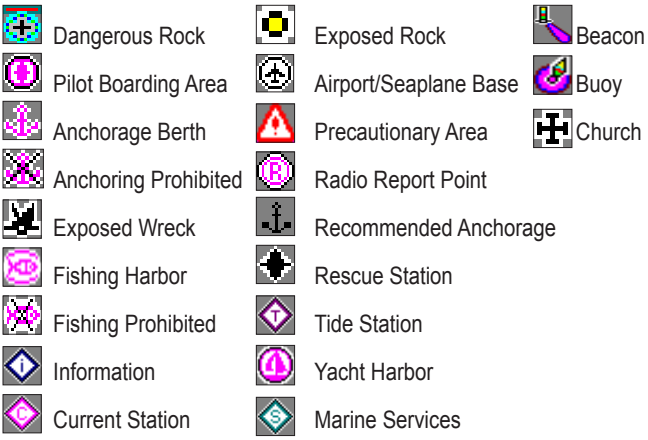
**Overlay Numbers**—control how important numbers appear on the screen. Choose to show or hide different numbers by category. Select Auto to show navigation, fishing, and sailing numbers. When a category is set to Auto, those numbers will only appear when that category is active.

- **Cruising**: GPS position, GPS heading, GPS speed, and depth (Depth is only available if connected to a sonar unit.)
- **Navigation**: GPS position, distance, arrival (time), bearing (to destination), GPS heading, and GPS speed. These numbers appear only when navigating to a destination (see page 23).
- **Fishing**: GPS position, depth, water temp, and water speed (Depth, temp, and water speed are only available when connected to a capable sonar unit.)
- **Sailing**: GPS position, waypoint velocity made good (VMG), wind speed, wind direction, water speed, and depth. (Wind speed and direction are only available when connected to a capable NMEA 0183 wind sensor. Water speed and depth are only available when connected to a capable sonar unit.) If you have a capable wind sensor, setting the sailing overlay numbers to Auto places an indicator around the boat icon on the navigation chart to represent wind speed and direction.

**Chart Setup**—customizes the navigation chart. See page 12.

## Understanding Chart Data

BlueChart g2 and BlueChart g2 Vision charts use graphic symbols to denote map features. Some common symbols you might see include, but are not limited to, the following:*




*Some symbols might appear differently on your Garmin unit.

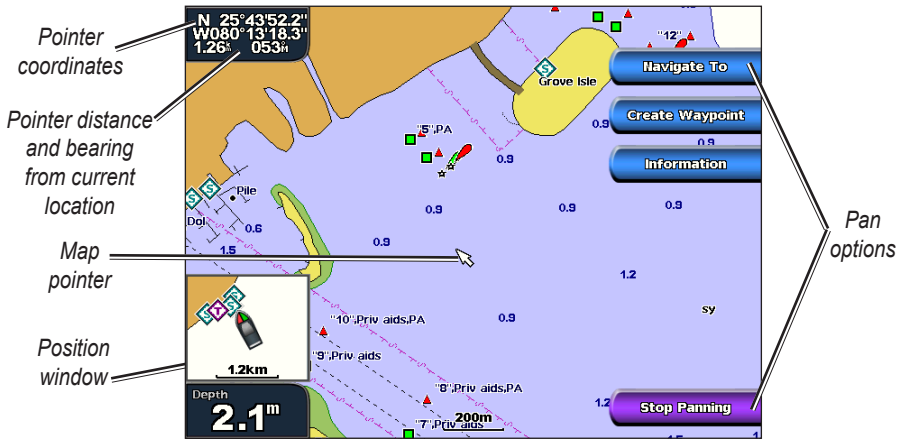
Other features common to most charts include depth contour lines (with deep water represented in white), intertidal zones, spot soundings (as depicted on the original paper chart), navigational aids and symbols, and obstructions and cable areas.

## Panning the Navigation Chart

By pressing the ROCKER, use the map pointer ( ) to pan away from your current location, and scroll to other areas on the navigation chart. As you pan past the edge of the current map display, the screen scrolls forward to provide continuous map coverage. The position icon ( ) stays at your present location. If the position icon leaves the map when you pan, a small window appears in the corner so you can keep track of your current position.

As you move the map pointer, its coordinates, distance, and bearing from your current location appear in the upper-left corner of the map.

To pan the map, press up, down, right, or left on the **ROCKER**.




**Navigation Chart on a GPSMAP 4208**

To stop panning, select **Stop Panning** from the options on the right.

As you pan the map, a list of options appear along the right side. These options change as you move the map pointer over various objects and charts. To access an option, press the corresponding soft key:

**Review**—(may not appear if the pointer is not near an object - if the pointer is near only one object, its name will appear instead of **Review.**) This allows you to view details of objects in the vicinity of the pointer. When you select review, you are presented with a list of all the objects near the pointer. See page 10 for more information.

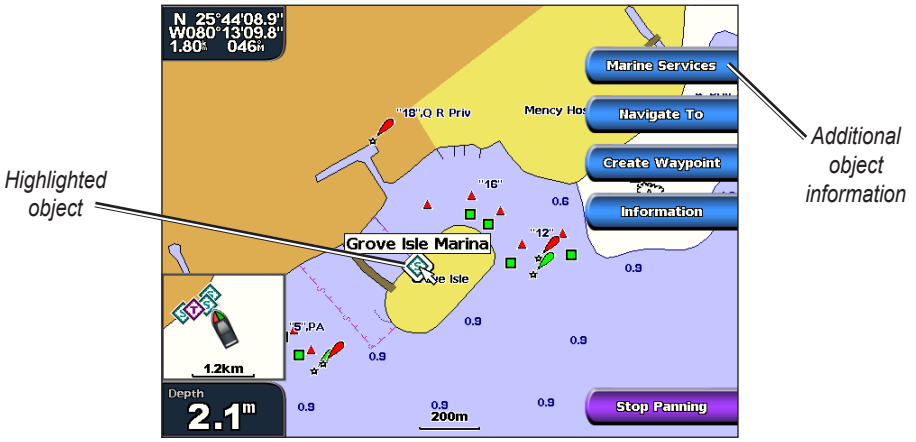
**Navigate To**—allows you to begin navigation to the location of the pointer. For more information, see page 23.

**Create Waypoint**—marks a waypoint at the location of the pointer. For more information, see page 25.

**Information**—view tide station (page 29), current station (page 29), celestial (page 30), weather (page 53), or chart information near the location of the pointer.

## Accessing Additional Object Information

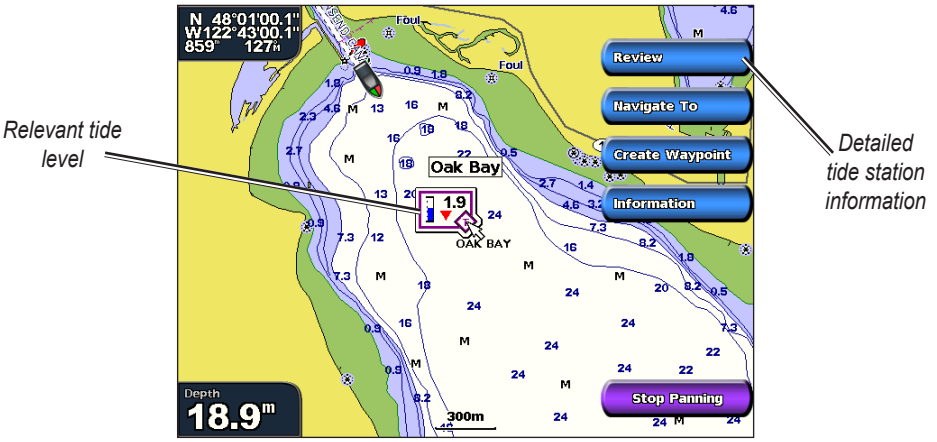
Use the map pointer ( ) to view information about on-screen map items, waypoints, and charts. Select the first option on the right with the object highlighted.




**Object Selected on a GPSMAP 4208**

## Viewing Tide Station Information

Tide station information appears on the chart with a detailed icon showing the relevant tide level. You can view an in-depth graph for a tide station to help predict the tide level at different times or different days.




**Tide Station Selected on a GPSMAP 4208**

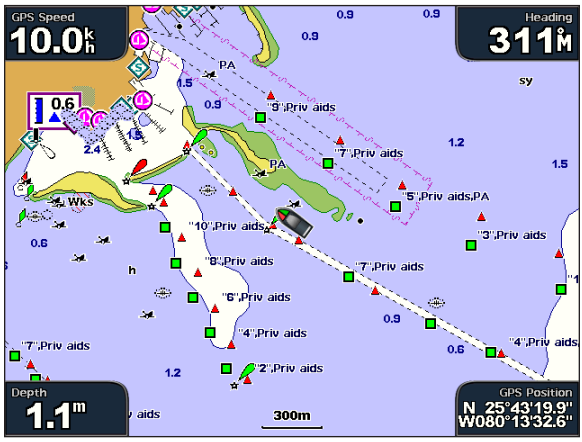
Use the map pointer ( ) to highlight a tide station icon ( ), and select Review for a detailed tide graph. For more information about tides, see page 29.

# Using Mariner's Eye

Mariner's Eye provides a view from above and behind the boat (according to your course), and provides a visual navigation aid. This view is helpful when navigating tricky shoals, reefs, bridges, or channels, and is beneficial when trying to identify entry and exit routes in unfamiliar harbors or anchorages.

To access the Mariner's Eye screen, from the Home screen, select **Charts** > **Mariner's Eye**.

**Mariner's Eye**




**Navigation Chart**

The **RANGE (+)** key moves the view closer to your boat and lower to the water, while the **RANGE (-)** key moves the view away from the boat. This is indicated by the scale (58%) at the bottom of the screen.

### *Mariner's Eye Settings*

To access additional settings or options from the Mariner's Eye screen, press **MENU.**

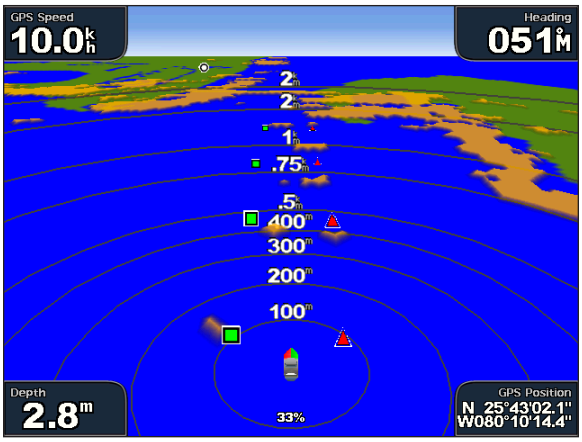
**Rings**—toggle the range rings on or off.

**Tracks**—turn the visible tracklog on or off. The unit continues to record tracks if you turn this setting off, but they will be hidden from view.

**Safe Depth**—adjusts your boat's safe depth.

**Lane Width**—adjust the width of the course line drawn on the screen when navigating using Go To navigation. This setting does not affect routes **(Route To)** or automatic guidance **(Guide To).**

**Show Radar—**If you are connected to a Garmin Marine Radar through the Garmin Marine Network, you can overlay your radar readings on the Mariner's Eye screen.




**Mariner's Eye With Radar Information**

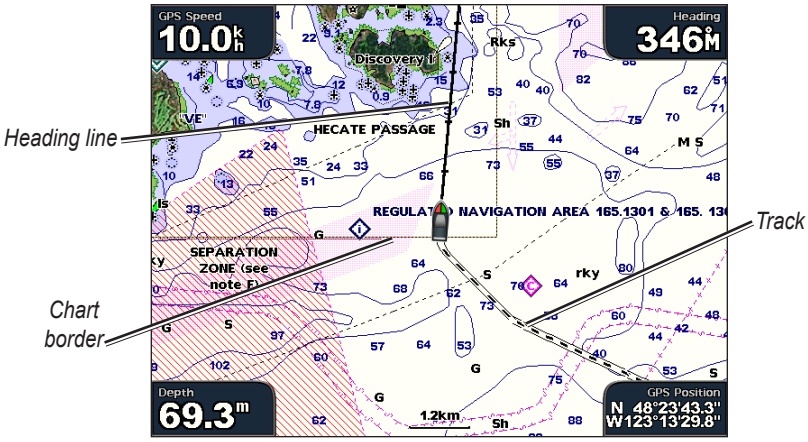
**Overlay Numbers**—show or hide cruising, navigation, fishing, and sailing numbers just as on the navigation chart (page 8).

## Changing the Chart Settings

To change chart settings, from the Home screen, select **Charts** > **Chart Setup**, or press **MENU** while viewing the navigation chart and select **Chart Setup**.

**Orientation**—change the perspective of the map display:

- **North Up**—sets the top of the map display to a north heading.
- **Track Up**—sets the map display to the current track heading.
- **Course Up**—sets the map so the direction of navigation is always up. The heading line will appear vertically on the screen if it is shown.




**Heading Line**—draws an extension from the bow of the boat in the direction of travel.

- **Off**—turns off the heading line.
- **Distance**—sets the distance to the end of the heading line.
- **Time**—sets the amount of time until you reach the end of the heading line.
- **Chart Borders**—turn on chart borders if you are using a BlueChart g2 Vision SD card and you want to see what area the maps cover.

**Tracks**—hides (off) or shows (on) tracks on the chart.

**Appearance**—customizes how items are shown on the map.

### *Changing the Chart Appearance*

From the Home screen, select **Charts** > **Chart Setup** > **Appearance**, or press **MENU** while viewing the navigation chart and select **Chart Setup** > **Appearance.**

**Detail**—adjusts the amount of detail shown on the map at different zoom levels. The **Most** setting will show the most detail at higher zoom levels, but the maps may take longer to draw. The **Least** setting will not show map details until the lower zoom levels.

**Photos**—sets the high resolution satellite images to on, off, or land only. High-resolution satellite imagery is only available while using a BlueChart g2 Vision SD card. See page 14 for more information.

**Spot Depths**—turns on spot soundings and set a dangerous depth.

**Light Sectors**—adjusts the drawing of light sectors on the map.

**Symbols**—selects the navaid symbol set (NOAA or IALA).

**Symbol Size**—adjusts the size of the symbols shown on the map.

# Using BlueChart g2 Vision

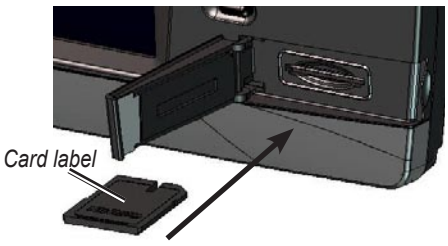
Optional BlueChart g2 Vision preprogrammed SD cards allow you to get the most out of your unit. In addition to detailed marine charting, BlueChart g2 Vision has the following features:

- **Mariner's Eye 3D**—a view from above and behind the boat, for a visual, 3 dimensional navigation aid. The BlueChart g2 Vision Mariner's Eye 3D is more detailed than the preloaded data.
- **Fish Eye 3D**—an underwater, 3 dimensional view that visually represents the sea floor according to the chart's information.
- **Fishing Charts—**view the chart with enhanced bottom contours and without navigational data. This chart works best for offshore deep-sea fishing.
- **High Resolution Satellite Imagery**—high resolution satellite images are provided for a realistic view of the land and water on the Navigation chart.
- **Aerial Photos**—view marinas and other navigationally significant aerial photos to help you visualize your surroundings.
- **Detailed Roads and POI data**—view roads, restaurants, and other points of interest (POIs) along the shore.
- **Current Data**—view current station information.
- **Auto Guidance**—uses the specified boat safe depth and chart data to determine the best course to your destination.

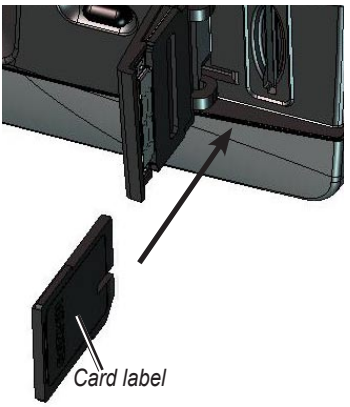
## *Using the SD card*

You can insert or remove a BlueChart g2 Vision SD card while your Garmin GPS unit is on or off. Insert the SD card, label up, into the open SD card slot on your Garmin GPS unit and press in until it clicks. Press in again to eject the SD card.

BlueChart g2 Vision SD cards are not waterproof. When the card is not inserted in the Garmin GPS unit, keep it in the original packaging and store it away from exposure to sun and rain. BlueChart g2 Vision SD cards are susceptible to damage from static electricity. In low humidity environments, you should ground yourself on a large metal object before handling the card.




GPSMAP 4012 or 4212



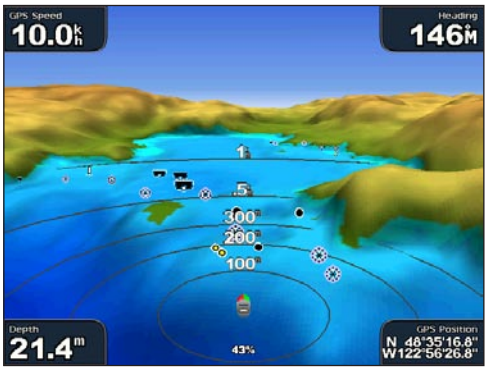

GPSMAP 4008 or 4208

**NOTE:** BlueChart g2 Vision data cannot be transferred from the SD card to your PC for backup or viewing purposes. The SD card can only be used on BlueChart g2 Vision compatible Garmin GPS units.

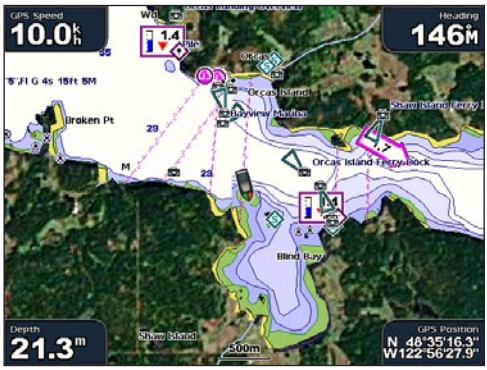
# Using Mariner's Eye 3D

A BlueChart g2 Vision SD card offers Mariner's Eye 3D, which provides a detailed 3 dimensional view from above and behind the boat (according to your course), and provides a visual navigation aid. This view is helpful when navigating tricky shoals, reefs, bridges, or channels, and is beneficial when trying to identify entry and exit routes in unfamiliar harbors or anchorages.






Mariner's Eye 3D




Navigation Chart

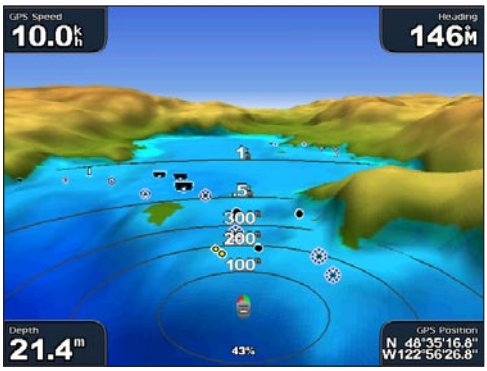
The **RANGE (+)** key moves the view closer to your boat and lower to the water, while the **RANGE (-)** key moves the view away from the boat. This is indicated by the scale (58%) at the bottom of the screen.

## *Mariner's Eye 3D Settings*

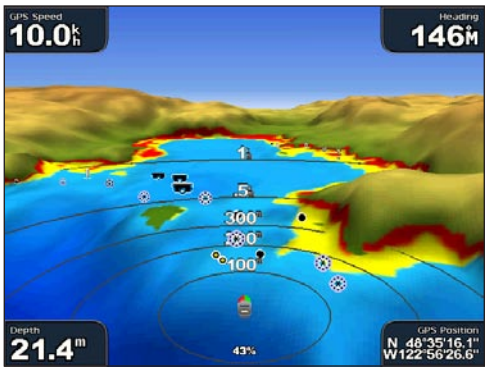
To access additional settings or options from the Mariner's Eye 3D screen, press **MENU.** The options and additional settings are the same as the Mariner's Eye screen (page 12), with the exception of Colors:

**Colors**—choose between **Normal** (Default), **Water Hazard**, and **All Hazard**. The **Normal** setting shows the land as seen from the water. The **Water Hazard** setting indicates shallow water and land with a color scale. Blue indicates deep water, yellow is shallow water, and red is very shallow. The **Water Hazard** setting indicates land in green and brown, and the **All Hazard** setting uses the same color scale, but shows land as dark red.

**Safe Depth**—adjust the depth at which red indicates shallow water. This also changes the global Safe Depth setting as it applies to the Auto Guidance feature. See page 38 for more information.



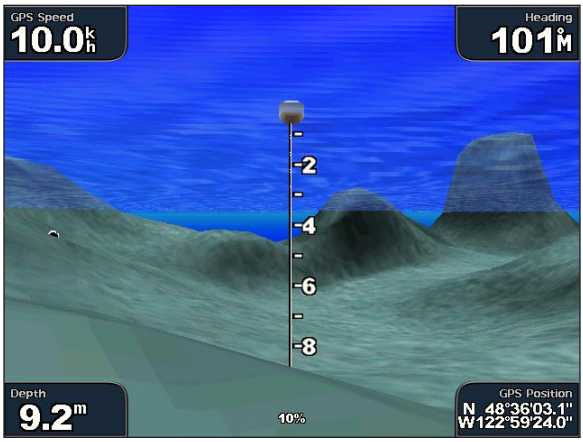

Mariner's Eye 3D, Normal Colors




Mariner's Eye 3D, Hazard Colors

## Using Fish Eye 3D

Using the depth contour lines of the BlueChart g2 Vision cartography, Fish Eye 3D provides an underwater view of the sea floor or lake bottom. The **RANGE** keys adjust the view in the same way as the Mariner's Eye 3D.




**Fish Eye 3D**

### *Fish Eye 3D Settings*

To access additional settings or options for the Fish Eye 3D screen, press **MENU.**

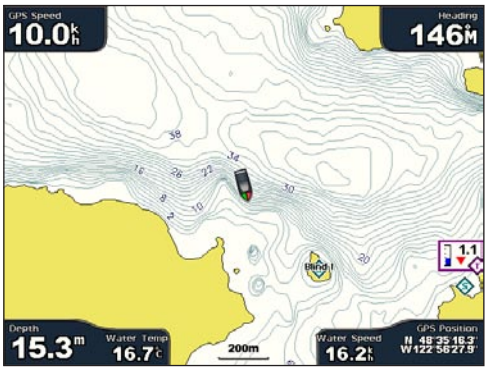
**Sonar Cone**—turn a cone on or off that shows the area covered by your transducer.

**Tracks**—turn the track log on or off.

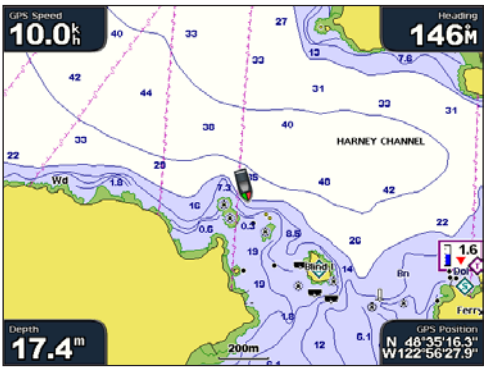
**Overlay Numbers**—show or hide cruising, navigation, or fishing numbers just as on the navigation chart (page 8).

## Using Fishing Charts

Use the fishing chart for a detailed, unobstructed view of the bottom contours and depth soundings on the chart.




**Fishing Chart**




**Navigation Chart**

The fishing chart uses detailed bathymetric data on on a preprogrammed BlueChart g2 Vision SD card, and is best for offshore deep-sea fishing.

# Enabling High Resolution Satellite Imagery

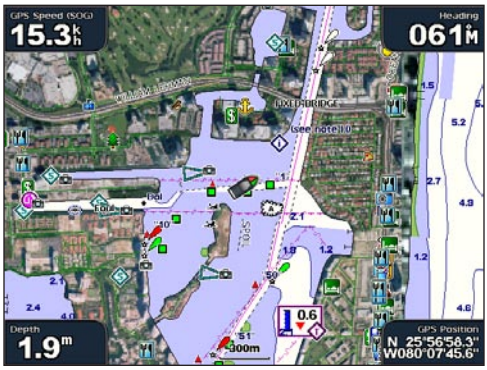
You can overlay high-resolution satellite images on the land, sea, or both portions of the Navigation chart when using a preprogrammed BlueChart g2 Vision SD card.

### To enable satellite imagery:

1. While viewing the **Navigation Chart**, press **MENU**.
2. Select **Chart Setup** > **Appearance** > **Photos**.
3. Select one of the following:
   - **Off**—standard chart information is shown on the map.
   - **Land Only**—standard chart information is shown on water with photos overlaying the land.
   - **On**—photos overlay both the water and the land at a specified opacity. The higher you set the percentage, the more the satellite photos will cover both land and water.

**NOTE:** When enabled, the high resolution satellite images are only present at lower zoom levels. If you cannot see the high resolution images in your BlueChart g2 Vision region, either zoom in further using the **RANGE (+)** key, or set the detail level higher (see page 13).

Photo Overlay Off




Land Only Photo Overlay

Photo Overlay at 50%

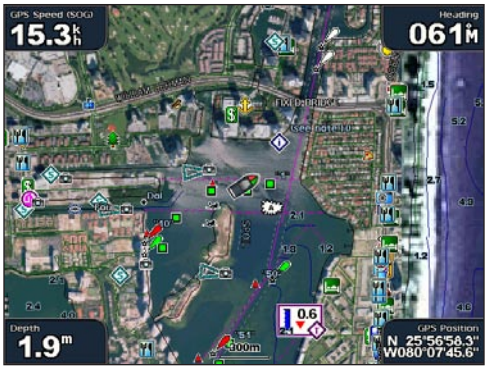
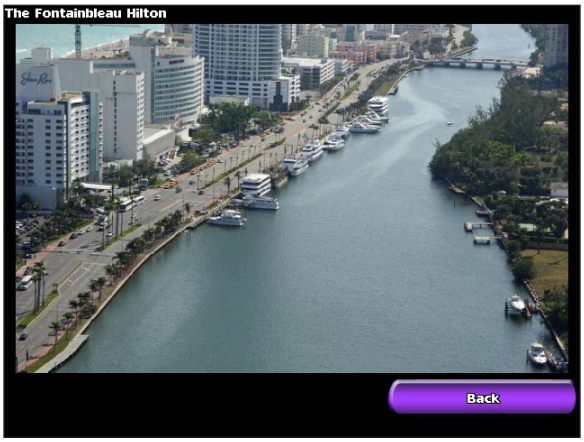



Photo Overlay at 100%

## Viewing Aerial Photos

Preprogrammed BlueChart g2 Vision SD cards contain aerial photographs of many landmarks, marinas, and harbors. Use these photos to help orient yourself to your surroundings or to help acquaint yourself with a marina or harbor prior to arrival.



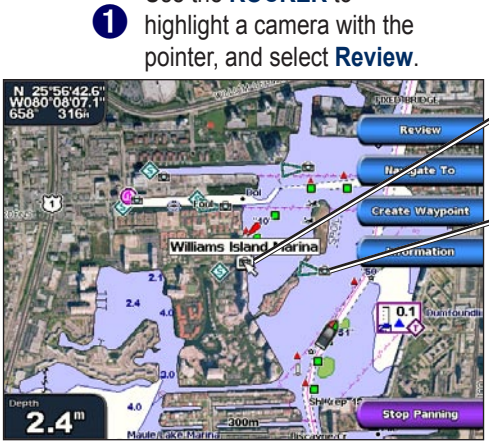



**Aerial Photo**

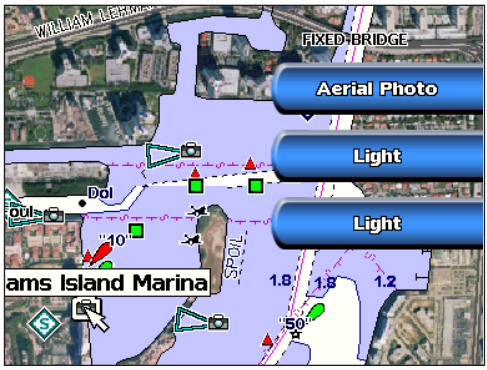
**NOTE:** Use the **RANGE** (+/-) keys to zoom in and out while viewing the aerial photo on the full screen.

## To access aerial photos from the navigation chart:

1. Use the **ROCKER** to highlight a camera with the pointer, and select **Review**.




2. Select **Aerial Photo**.




3. Select **View Fullscreen**.

## Viewing Current Station Information

If current stations are available in your g2 Vision region, they appear on the navigation chart as a highlighted arrow. This detailed icon shows the current's speed and direction at a glance. For more information about current stations, see page 29.

*Current Station icon*

## Detailed Road and POI Data

BlueChart g2 Vision contains detailed road and POI data, which includes highly detailed coastal roads and points of interest (POIs) such as restaurants, lodging, local attractions, and more. For instructions on searching for and navigating to these POIs, see the *Where To* section beginning on page 23.

## Using Automatic Guidance

Automatic Guidance automatically creates and suggests passage based on available BlueChart g2 Vision chart information. See page 38 for instructions on setting up Automatic Guidance for your boat. The *Where To* section on page 23 has more information on how to use Automatic Guidance.

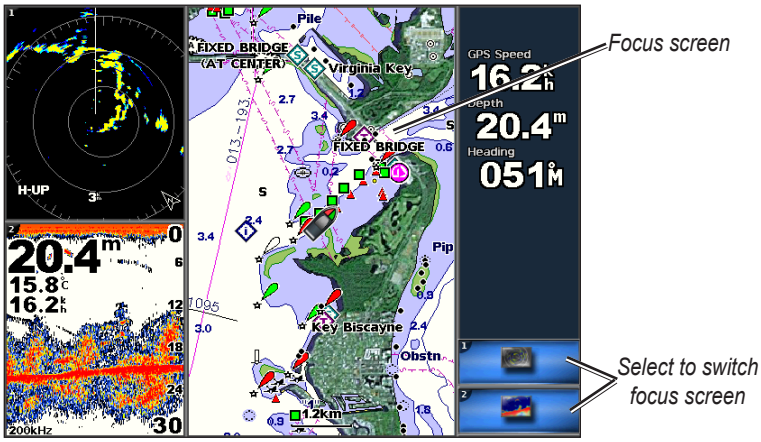
# USING COMBINATIONS

Use the Combinations screen to view a combination of different screens at the same time. The number of options available on the Combinations screen depends on the optional network devices you have connected to your GPSMAP 4000 series unit, and if you are using an optional BlueChart g2 Vision SD card. You can choose to combine two or three screens.

**Combinations Screen**

When you choose Combinations from the Home screen, you are presented with a list of possible screen combinations to choose from. Once you select a combination, you can customize it if you like.

When viewing combined screens, one is larger than the rest, and acts as the screen in focus. You can switch the focus screen on the fly. Select the icon from the bottom right that represents the screen you want to have as the focus.




**Nav Chart, Radar, and Sonar Combination**

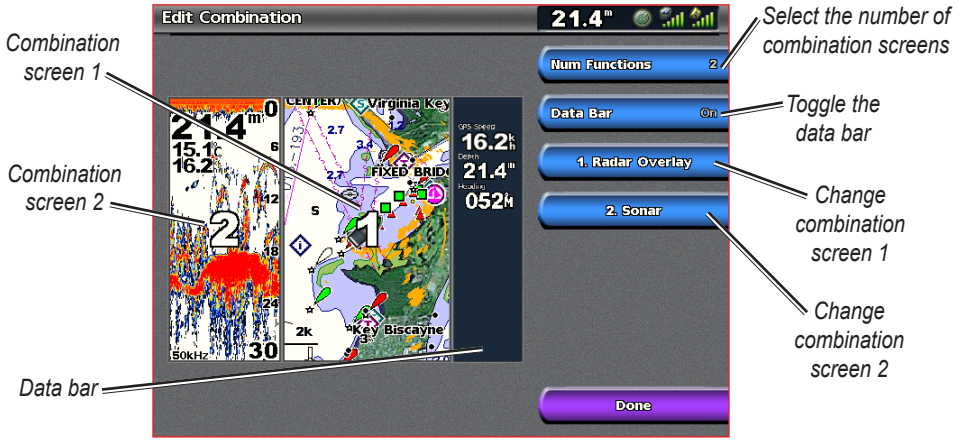
To access additional settings or options for the Combinations screen, press **MENU**. Select the name of the screen you want to change. The chosen screen will expand, and you will be able to select an option. For a description of the settings for each screen, see the corresponding section.

### To customize the screen combinations:

1. While viewing the Combinations screen, select **MENU > Change Combination.**

   OR

   From the Home screen, select **Combinations > Unused Combo** (if one is open).




2. Select the number of combination screens (1-3), toggle the data bar on or off, and choose the combination screens to view.
3. Select **Done**.

**NOTE:** When you select the combination screens to view, you will only be able to choose from the options available to your unit. You can increase the number of screens available by using a BlueChart g2 Vision SD card and adding network devices such as sonar and radar.

# USING WHERE TO

Use the **Where To** option on the Home screen to search for and navigate to nearby fuel, repairs, and other services, as well as waypoints and routes.

**NOTE:** You must create waypoints and routes before you can navigate to them.

You can navigate to a destination using one of three methods: Go To, Route To, or Guide To.

- **Go To**—takes you directly to the destination.
- **Route To**—creates a route from your location to a destination, allowing you to add turns to the route.
- **Guide To**—searches BlueChart g2 Vision chart data to suggest the best path to your destination. You must be using a BlueChart g2 Vision SD card for this option to appear.

**CAUTION:** Guide To does not assure obstacle and bottom clearance. For safety, always resolve any discrepancies or questions before continuing navigation.



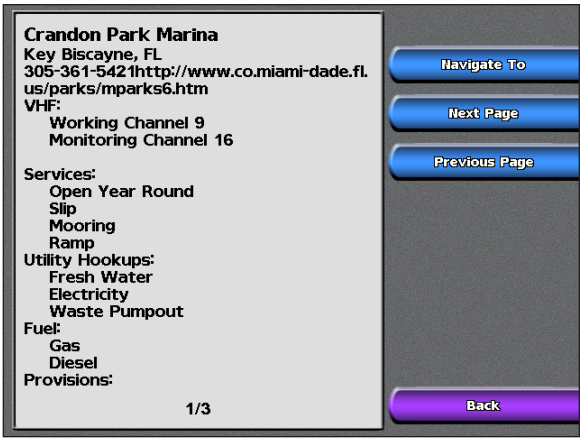
## Navigating to a Destination

You can search for, and navigate to, nearby destinations including fuel, repairs, marinas, waypoints, and routes.

### To begin navigating:

1. From the Home screen, select **Where To.**
2. Select the marine service category to which you want to navigate. The unit shows the list of the 50 nearest locations and the distance to each.

3. Select the marine service item to which you want to navigate. A screen containing information about the selected marine service appears.

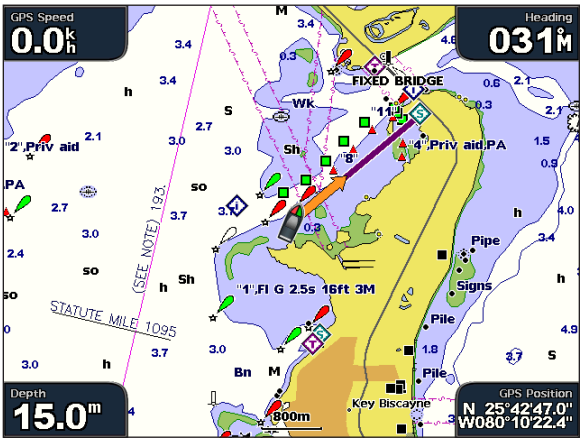





4. Select **Navigate To**.
5. Select **Go To**.

   OR

   Select **Guide To** when using a preprogrammed BlueChart g2 Vision card to use Auto Guidance.
6. Follow the colored line on the screen to the destination.




### To stop navigating:

From the chart, Select **Menu**, and then select **Stop Navigating**.

### To search for a destination by name:

1. From the Home screen, select **Where To** > **Search by Name**.
2. Use the **ROCKER** or **NUMERIC KEYPAD** (4012/4212 only) to select characters and spell at least a portion of the name of your destination.

3. Select **Done** to view the 50 nearest destinations that contain your search criteria.
4. Select the best location, then select **Navigate To** > **Go To** (or **Route To**).

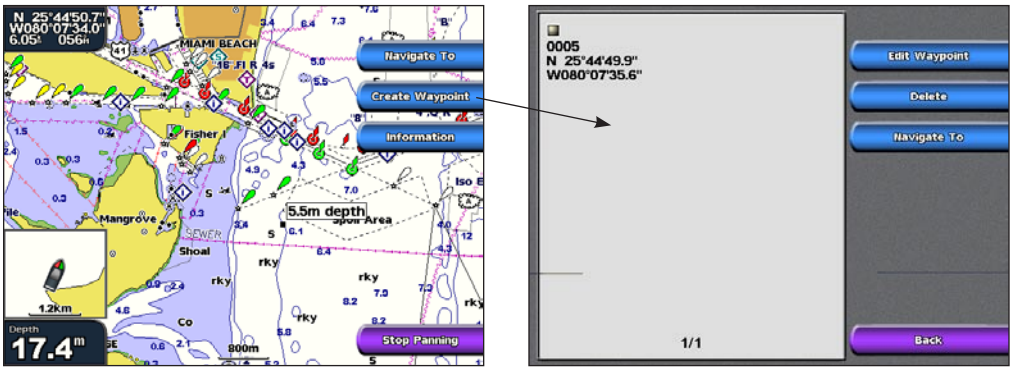


## Creating and Using Waypoints

You can store up to 1,500 alphanumeric waypoints with a user-defined name, symbol, depth, and water temp for each waypoint.

### To create a new waypoint:

1. From the Home screen, select **Charts** > **Navigation Chart**.
2. By pressing the **ROCKER**, use the map pointer ( ) to select the location you want to designate as a waypoint.
3. Select **Create Waypoint**.




4. Select one of the following:
   - **Edit Waypoint**—designate a specific name, symbol, water depth, water temperature, or position.
   - **Delete**—delete the waypoint.
   - **Navigate To**—go to the waypoint.
   - **Back**—return to the navigation chart.

### To mark your current location as a waypoint:

1. At any time, press the **MARK** key.
2. Select **Edit Waypoint** to designate a specific name, symbol, water depth, water temperature, or position. Select **Back** or **Home** to return to the Home screen.

**NOTE:** Selecting **Mark** only creates a waypoint at your present location.

### To mark an MOB (Man Overboard) location:

When you mark a waypoint, you can designate it as an MOB (Man Overboard). This marks the point and sets a course back to the marked location. When an MOB is active, an MOB waypoint with an international MOB symbol is created, and the unit is on an active navigation to that point.

1. At any time, press the **MARK** key.
2. Select **Man Overboard**.

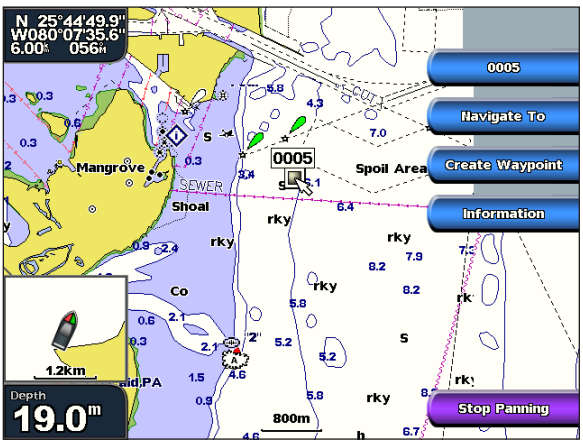


### To edit an existing waypoint:

1. From the Navigation chart, press the **ROCKER** and use the map pointer ( ) to highlight the waypoint on the navigation chart.

   OR

   From the Home screen, select **Information > User Data > Waypoints**.
2. Select the button for the waypoint you want to edit.




4. Select **Edit Waypoint**.
5. Select the waypoint attribute you want to change (**Name**, **Symbol**, **Depth**, **Water Temp**, or **Position**).

### To move the waypoint on the navigation chart:

1. Select the waypoint on the navigation chart.
2. Select **Review**.
3. Select the button for the waypoint you want to edit.
4. Select **Edit Waypoint**.
5. Select **Position**.
6. Select **Use Chart** or **Enter Coordinates**.
7. If entering coordinates, use the **ROCKER** or **NUMERIC KEYPAD** (4012/4212 only) to enter the new coordinates for the waypoint. If using the chart, highlight the new location with the map pointer ( ), and select **Move Waypoint**. The waypoint moves to the new location.

### To view a list of all waypoints:

From the Home screen, select **Information** > **User Data** > **Waypoints**.

### To delete a waypoint or MOB:

1. From the Navigation chart, press the **ROCKER** and use the map pointer ( ) to highlight the waypoint on the navigation chart.

   OR

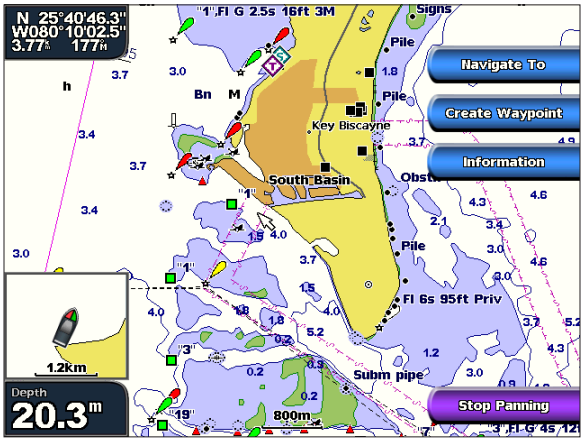
   From the Home screen, select **Information** > **User Data** > **Waypoints**.
2. Select the waypoint or MOB you want to delete.
3. Select **Delete**.

## Creating and Using Routes

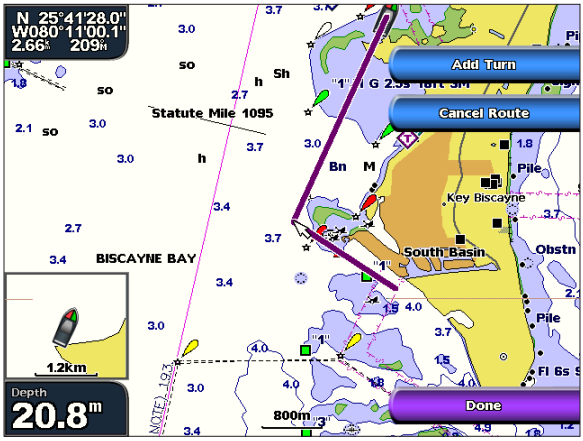
You can create and store up to 20 routes with up to 250 waypoints each.

### To create a route from your present location:

1. From the Navigation chart, press the **ROCKER** and use the map pointer ( ) to choose your destination.




2. Select **Navigate To** > **Route To**.
3. Use the map pointer ( ) to choose where you want to make the first turn.
4. Select **Add Turn**.




5. To add additional turns, choose where you want to make the turn and select **Add Turn**.
6. Select **Done** to finish the route or **Cancel Route** to delete the route.

### To create a route in another location:

1. From the Home screen, select **Information** > **User Data** > **Routes** > **New Route**.
2. By pressing the **ROCKER**, use the map pointer ( ) to select the location you want to start the new route.
3. Select **Add Turn** to mark the starting point of the route.
4. Choose the location of the first turn and select **Add Turn**. Repeat until the route is complete.
5. Select **Done** when the route is complete.

### To edit a route

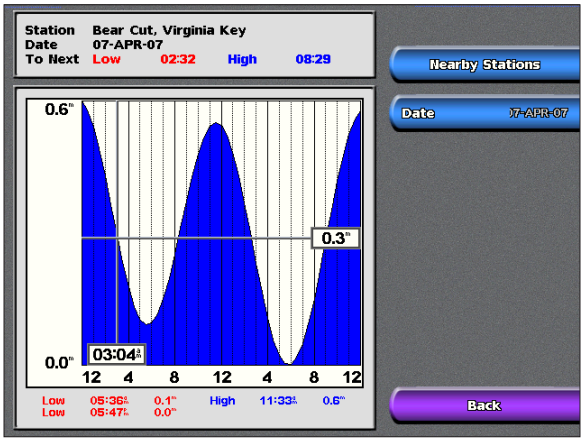
1. From the Home screen, select **Information** > **User Data** > **Routes**.
2. Select the route to edit.
3. Select **Edit Route**. You can edit the route name, turns, or delete the route.

# VIEWING INFORMATION

Use the Information screen to access information about tides, currents, celestial data, user data, other boats, gauges, and video.

## Viewing Tide Station Information

To view tide information from the Home screen, select **Information** > **Tides**, then select a tide station from the list.




**NOTE:** You can also select tide information for a tide station, a current station, or celestial information directly from the Navigation chart. From the Navigation chart, press the **ROCKER** and use the map pointer ( ) to choose an area. Select **Information > Tides/Currents/Celestial**.

Press right and left on the ROCKER to adjust the timeline. This is helpful for predicting the tide level at a specific time of day.

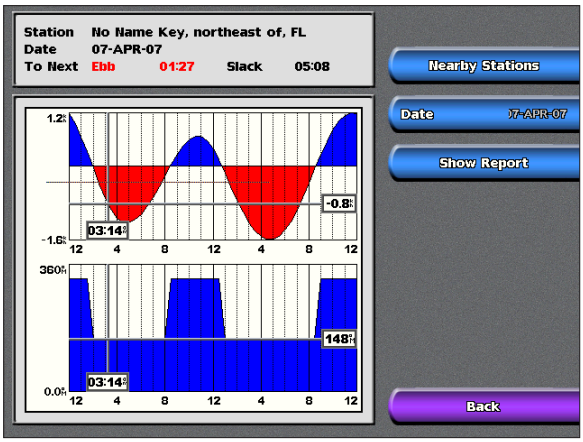
- Select **Nearby Stations** to view other stations close to the one you selected.
- Select **Date** > **Manual** to view tide information for a different date.
- Select **Date** > **Current Date** to return to the current date.

## Viewing Current Information

Use the Current Prediction screen to view information for currents.

**NOTE:** You must use a BlueChart g2 Vision card to view Current Station information.

To view current information from the Home screen, select **Information** > **Currents**, then select a current station from the list.



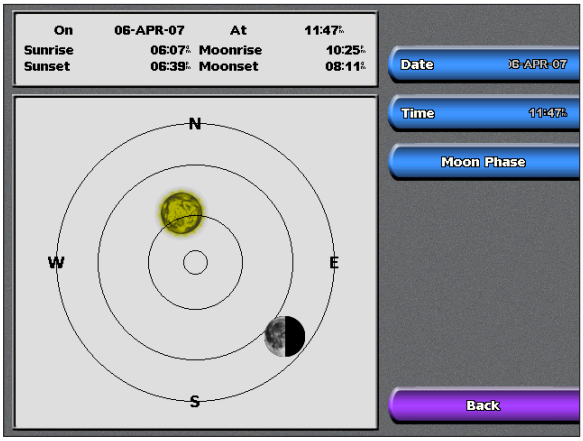

Press right and left on the **ROCKER** to adjust the timeline. This is helpful for predicting the current information at a specific time of day.

- Select **Nearby Stations** to view other current stations close to the one you selected.
- Select **Date** > **Manual** to view current information for a different date.
- Select **Date** > **Current Date** to return to the current date.
- Select **Show Report** to view the Current Report for the selected station, .

## Viewing Celestial Information

Use the Celestial screen to view celestial data for sun and moon rise/set, moon phase, and approximate sky view location of the sun and moon.

To view celestial information from the Home screen, select **Information** > **Celestial**.




- Select **Date** > **Manual** to view information for a different date.
- Select **Time** to view information for a specified time on that date.
- Select **Moon Phase** to view the moon phase at a specified date and time.

## Viewing User Data

To view user data from the Home screen, select **Information** > **User Data**.

**Waypoints**—view a list of all saved waypoints (page 25).

**Routes**—view a list of saved routes (page 27).

**Tracks**—view a list of saved tracks.

**Data Transfer**—transfer waypoints, routes, and tracks to and from an SD card or network.

### To transfer data to or from an SD card:

1. Insert an SD card into the SD card slot on the front of the unit.
2. From the Home screen, select **Information** > **User Data** > **Data Transfer** > **Card**.

   Complete one of the following:

   - Select **Save To Card** to save waypoints, routes, and tracks to the SD card.
   - Select **Merge From Card** to transfer data from the SD card to the unit and combine it with existing user data.
   - Select **Replace From Card** to overwrite items on your unit.

### To transfer data to or from a network:

1. Connect the unit to a Garmin Marine Network using the network port on the back of the unit and a Garmin Network cable.
2. From the Home screen, select **Information** > **User Data** > **Data Transfer** > **Network**.

   Complete one of the following:

   - Select **Clone User Data** to transfer waypoints, routes, and tracks to other chartplotters connected to the network. Existing data will be overwritten on those chartplotters.
   - Select **Merge User Data** to transfer data between all the chartplotters connected to the network. Unique data will be combined with existing data on every chartplotter.

**Clear User Data**—erase all user waypoints, routes, and tracks.

## Viewing Information on Other Boats

To view information about other boats from the Home screen, select **Information** > **Other Boats**.

**NOTE:** To view information about other boats, your unit must be connected to an external AIS (Automatic Identification System) or DSC (Digital Selective Calling) device. See page 40 for more information.

**AIS List**—view information about all of the boats your unit is monitoring. Select **AIS List** to view the MMSIs (Maritime Mobile Service Identities) or names (if the boat is broadcasting a name) of nearby AIS-equipped boats. The AIS list is sorted by range, with the boat nearest to your boat at the top of the list.

**DSC Log**—view a list of all DSC calls, sorted by most recent, sender, or by type (distress calls or position reports).

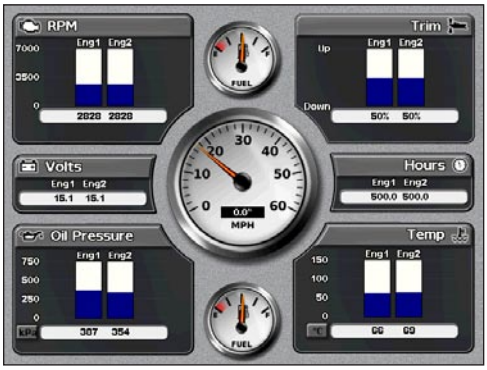
- **View By Time**—view the most recent DSC calls received, sorted and displayed chronologically by time and date. Calls with identical time and date information show the same information in the list.
- **View By Sender**—view an alphanumerical list of senders.
- **View By Type**—view the most recent distress calls or position reports, sorted chronologically.
- **Delete All**—delete all log entries.

**DSC Call List**—view the 100 most recent calls. The DSC Call List shows the most recent call from a boat. If a second call is received from the same boat, it replaces the first call in the Call List.

**Directory**—view a list of all DSC entries. You can view by name or by MMSI. You can also add an entry.

# Viewing Gauges

Use the Gauges screen to view engine gauges in an analog or digital.




**NOTE:** You must be connected to a NMEA 2000 network capable of sensing engine data to view the gauges. For more information on supported NMEA 2000 PGN information, see page 67.

### To select analog or digital gauges:

1. To view the Gauges from the Home screen, select **Information** > **Gauges**.
2. To select analog or digital gauges, select **Menu** from the Gauges screen.

Select **Gauge Setup** to select the number of engines (1 - 4), number of fuel tanks (1 or 2), and to reset the odometer to zero.

**NOTE:** For more than two engines, you can only use the digital gauges. For one or two engines, you can switch between analog and digital gauges.

## Viewing Video

Your unit can display video if you connect to a video source using the supplied video cable. See the installation instructions for details.

To view video from the Home screen, select **Information** > **Video**.

Select **Menu** to setup the following:

- **Source**—selects the video device (1 or 2) that will display the video. If you have two video sources and wish to alternate between the two, select **Alternate** to define the amount of time each video is displayed.
- **Aspect**—switches between the standard aspect ratio and a stretched aspect ratio. The video cannot be stretched beyond the dimensions provided by the connected video device. Because of this, the stretched video may not fill the entire screen of the 4012 and 4212 units.
- **Brightness**—adjusts the brightness of the video feed up or down, or select **Auto** to allow the unit to automatically adjust the brightness.
- **Saturation**—adjusts the color saturation up or down, or select **Auto** to allow the unit to automatically adjust the saturation.
- **Contrast**— adjusts the contrast up or down, or select **Auto** to allow the unit to automatically adjust the contrast.
- **Standard**—selects the video format used by the source (PAL or NTSC). Select **Auto** to let the unit automatically select the source format.

# Configuring the Unit

Use the Configure screen to configure unit settings.

## Configuring System Settings

To change general system settings, from the Home screen, select **Configure** > **System**.

**Simulator**—turn Simulator Mode on or off and set Simulator Mode options. (If you set the unit into a Store Demonstration mode during the initial unit setup, this setting will be named **Demo.**)

**Language**—select the on-screen language.

**Beeper/Display**—set Beeper options, Backlight, and Color Mode.

- Beeper—select **Beeper** to set when the unit makes audible sounds. The three settings are **Off**, **Alarms Only** (default), and **Key and Alarm** (keys and alarms).
- Backlight—select **Backlight** to adjust the intensity of the backlight or select **Auto** to allow the unit to automatically adjust the backlight based on ambient light.
- Color Mode—select **Color Mode** to select **Day Colors**, **Night Colors**, or **Auto** to allow the unit to adjust the colors.

**GPS**—view GPS satellites and turn WAAS (Wide Area Augmentation System)/EGNOS (European Geostationary Navigation Overlay Service) on or off.

**System Information**—view system information, restore factory settings, and view the status of networked devices (page 42).

**Event Log**—shows a list of system events.

**Overlay Numbers**—view or edit the options for Wind (**Apparent Wind** or **True Wind**) and Next Turn numbers (**Distance** or **Time**).



## Changing Units of Measure

To change units of measure from the Home screen, select **Configure** > **Units**.

**System Units**—this is a quick global setting that defines most of the individual units of measure listed below at once. **Statute** (mh, ft, ºF), **Metric** (kh, m, ºC), **Nautical** (kt, ft, ºF), or **Custom**. Select **Custom** to individually define units of measure for:

- **Depth**—individually set the units of measure for depth to **Feet**, **Fathoms**, or **Meters**.
- **Temperature**—individually set units of measure for temperature to **Fahrenheit (ºF)** or **Celsius (ºC)**.

**NOTE:** You must be receiving NMEA Sonar depth data or using a Garmin sounder module to view depth and water temperature information.

- **Distance**—individually set the units of measure for distance readings (**Miles**, **Kilometers**, or **Nautical Miles**).
- **Speed**—individually set the units of measure for speed readings (**Miles Per Hour**, **Kilometers Per Hour**, or **Knots**).
- **Elevation**—individually set the units of measure for elevation readings (**Feet** or **Meters**).
- **Volume**—individually set the units of measure for volume readings (**Liters**, **US Gallons**, or **UK Gallons**).

**Heading**—set the reference used in calculating heading information.

- **Auto Mag Var**—Automatic Magnetic Variation automatically sets the magnetic declination for your location.
- **True**—sets true north as the heading reference.
- **Grid**—sets grid north as the heading reference (000º).
- **User Mag Var**—allows you to set the magnetic variation value.

**Position Format**—change the coordinate style in which a given location reading appears. Only change the position format if you are using a map or chart that specifies a different position format.

**Map Datum**—change the coordinate system in which the map is structured. Only change the Map Datum if you are using a map or chart that specifies a different Map Datum.

**Time Format**—choose a 12 hour or 24 hour time format.

**Time Zone**—set the time zone you want displayed for time readings.

**Daylight Saving Time**—indicate whether you want daylight saving time **Off**, **On**, or **Auto**. The auto setting changes turns daylight saving time on or off, depending on the time of year.



## Configuring Communications Settings

To change the communications settings, from the Home screen, select **Configure** > **Communications**.

**Port Types**—select each port's input/output format (**NMEA Std.** or **NMEA High Speed**) to use when connecting your unit to external NMEA devices, a personal computer, or other Garmin devices.

- **NMEA Std.**—supports the input or output of standard NMEA 0183 data, DSC, and sonar NMEA input support for the DPT, MTW, and VHW sentences.
- **NMEA High Speed**—supports the input or output of standard 0183 data for most AIS receivers.

**NMEA 0183 Setup**—enable or disable NMEA 0183 output sentences for sounder, route, system, and Garmin NMEA settings.

**To enable or disable NMEA 0183 output sentences:**

1. From the Home screen, select **Configure** > **Communications** > **NMEA 0183 Setup**.
2. Select a setting (**Sounder**, **Route**, **System**, or **Garmin**).
3. Select the NMEA 0183 output sentence to turn it on or off.
4. Select **Off** to disable, or select **On** to enable the 0183 NMEA output sentence.

- **Posn. Precision**—adjust the number of digits (**Two Digits**, **Three Digits**, or **Four Digits**) to the right of the decimal point for transmission of NMEA output.
- **Waypoint IDs**—select how the unit outputs waypoint identifiers (**Names** or **Numbers**).
- **Defaults**—reset NMEA 0183 settings to their default settings (**OK** or **Cancel**).

**NMEA 2000 Setup**—set how the GPSMAP 4000 series unit is seen by a NMEA 2000 network.

- **Device Instance** is used if you have two or more of the same NMEA 2000 devices in your system. For example, if you have two 4208s in your system, select **Device Instance** and enter different numbers for each device.
- **System Instance** is only needed if you have two or more separate NMEA systems on your boat with a gateway between the systems. If this is the case, select **System Instance** and assign different numbers to each system.

## Setting Alarms

You can set the unit to sound an audible alarm when certain conditions are met. By default, all alarms are turned off.

**To set an alarm:**

1. From the Home screen, select **Configure** > **Alarms**.
2. Select an alarm category (**Navigation**, **Engine**, **System**, **Sonar,** or **Weather**). Alarms include:
   - Navigation - Anchor Drag, Arrival, Off Course
   - Engine - Fuel
   - System - Clock, Battery, GPS Accuracy
   - Sonar - Shallow Water, Deep Water, Water Temp, Fish
   - Weather (only if XM weather is available) - Marine, Tornado, Severe Storm, Flood, Flash Flood
3. Select an alarm.
4. Select **On** to turn the alarm on, and then Use the **ROCKER** or **NUMERIC KEYPAD** (4012/4212 only) to specify alarm information.

### Setting Navigation Alarms

To set a navigation alarm, from the Home screen, select **Configure** > **Alarms** > **Navigation**.

**Anchor Drag**—set an alarm to sound when you exceed a specified drift distance.

**Arrival**—set an alarm to sound when you are within a specified distance or time from a destination waypoint.

**Off Course**—set an alarm to sound when you are off course by a specified distance.

### Setting System Alarms

To set a system alarm, from the Home screen, select **Configure** > **Alarms** > **System**.

**Clock**—set an alarm using the system (GPS) clock. The unit must be on for the clock alarm to work.

**Battery**—set an alarm to sound when the battery reaches a user-determined low voltage.

**GPS Accuracy**—set an alarm to sound when the GPS location accuracy falls outside the user-determined value.

### Setting Sonar Alarms

To set a sonar alarm, from the Home screen, select **Configure** > **Alarms** > **Sonar**.

**NOTE:** You must have an optional sonar module (and a transducer connected to the sounder module) wired via NMEA 0183 or connected to the Garmin Marine Network to receive sonar information.



**Shallow Water/Deep Water**—set an alarm to sound when the depth is less than or greater than the specified value.

**Water Temp**—set an alarm to sound when the transducer reports a temperature that is 2° F (1.1° C) above or below the specified temperature.

**Fish**—set an alarm to sound when the unit detects a suspended target of the specified symbols.

### Setting Weather Alarms

To set a weather alarm from the Home screen, select **Configure** > **Alarms** > **Weather**.

**NOTE:** You must have a subscription to XM WX Weather and the optional GDL 30/30A module connected to the Garmin Marine Network to view weather information. Refer to page 53 for more information.

## Configuring My Boat

To configure settings for your boat - from the Home screen, select **Configure** > **My Boat**.

**Auto Guidance—**set the Auto Guidance parameters for your boat:

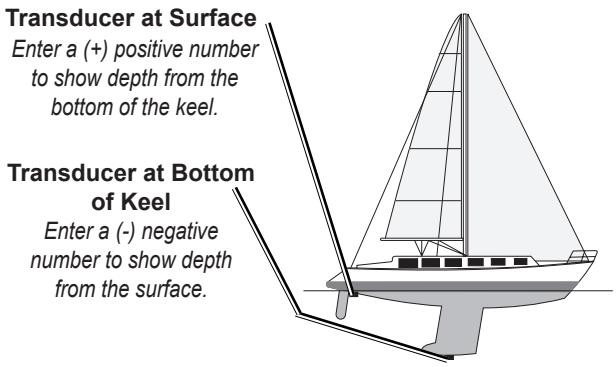
- **Safe Depth**—set the minimum depth (refers to the chart depth datum) to allow when calculating an auto guidance path.
- **Safe Height**—set the minimum height (refers to the chart height datum) of a bridge that your boat can safely travel under.

**Keel Offset**—offset the surface reading for the depth of a keel. This makes it possible to measure depth from the bottom of your keel instead of from the transducer's location. Enter a positive number to offset for a keel. You can enter a negative number to compensate for a large vessel that may draw several feet of water.

### To adjust the Keel Offset:

1. From the Home screen, select **Configure** > **My Boat** > **Keel Offset**.
2. Use the select screen keyboard to specify the offset.
3. Select **Done** to accept the number.

**NOTE:** Select **Cancel** to cancel your changes and return to the My Boat screen.


Transducer at Surface
Enter a (+) positive number to show depth from the bottom of the keel.
Transducer at Bottom of Keel
Enter a (-) negative number to show depth from the surface.

**Keel Offset**

**Transducer**—select the transducer type, set the temperature source, sonar cone angles, and calibrate water speed.

- **Type**—set the transducer type (Dual Frequency or Dual Beam).
- **Temperature Source**—set the temperature source (**Transducer** or **NMEA**).
- **Sonar Cone Angles**—when using a transducer other than the standard Garmin transducer, you can set the angle, in degrees, of the sonar cone so that it is accurately depicted on the Fish Eye 3D screen. Select either **200kHz** or **50kHz** and use the on-screen keyboard to enter the angle.

**NOTE:** The Sonar Cone Angles setting is preset to match the cone angle of a standard Garmin dual frequency transducer. This option should only be used to match the specifications of a non-standard transducer.

**Calibrate Water Speed**—use this menu to calibrate a speed sensing device. Follow the on-screen directions for calibration. If you do not have a speed sensing device, this menu does not appear.

**NOTE:** If the boat is not moving fast enough or the speed sensor is not registering a speed, a "**Speed Too Low**" message appears. Select **OK** and safely increase boat speed. If you get the message again, stop the boat and make sure the speed sensor wheel is not stuck. If the wheel turns freely, check the cable connections. If you continue to get the message, contact Garmin Product Support.

## Configuring Other Boats

To configure settings for boats other than your own - from the Home screen, select **Configure** > **Other Boats**.

**AIS**—turn AIS (Automatic Identification System) on or off. AIS alerts you to area traffic by providing boat IDs, position, course, and speed for boats equipped with a transponder within range.

**DSC**—turn DSC (Digital Selective Calling) on or off.

**NOTE:** To configure AIS or DSC information for other boats, your unit must be connected to an external AIS or DSC device. Refer to page 67 for more information on connecting NMEA 0183 devices.

**Safe Zone**—(AIS and MARPA only) turn a safe zone around your boat on or off. This is used for collision avoidance, and can be customized. To customize safe zone settings, from the Home screen, select **Configure** > **Other Boats** > **Safe Zone** > **Setup**.

- **Ring**—show or hide a ring on the Navigation chart showing the safe zone for your boat.
- **Range**—change the measured radius of the safe zone ring to a specified distance from 0.1 to 2.0 nm (or 0.2 to 5.0 km, or 0.1 to 2.0 mi).
- **Time to (Safe Zone)**—sounds an alarm if AIS or MARPA determines that a target will intersect the Safe Zone within the defined time interval (ranging from 3 to 24 minutes).

**Details**—show or hide the name, speed, and bearing of AIS or MARPA targets onscreen. The details appear next to the AIS or MARPA target icon.



## Configuring XM Audio

To configure XM audio from the Home screen, select **Configure** > **XM Audio**. You can delete a preset channel, select a category, enter a specific channel, and mute the volume.

**NOTE:** You must connect the optional GDL 30A XM receiver to the Garmin Marine Network, and have a subscription to XM Radio to use XM audio features. For more information, refer to page 53.

# Using the Marine Network

The Garmin Marine Network allows you to share data from Garmin peripheral devices between Garmin chartplotters quickly and easily. The GPSMAP 4000 Series units as well as the GPSMAP 5000 series units and previous Garmin Marine Network compatible chartplotter models (such as the GPSMAP 3010) can be connected to your network to share data. With the Garmin Marine Network, you can:

- Share GPS data from a GPS 17 antenna wired to one chartplotter with every chartplotter connected to the Marine Network.
- Share NMEA 0183 data from devices wired to one chartplotter with every chartplotter connected to the Marine Network.

**NOTE:** Both the GPS 17 and any NMEA 0183 devices must be connected to the same chartplotter to achieve the best results when sharing data over the Garmin Marine Network.

**NOTE:** If you are using a GSD 21 wired to a GPSMAP 3000 series chartplotter, the data will be shared with any GPSMAP 4000 series chartplotters connected to the network. All GSD 21 settings must be configured on the GPSMAP 3000 series chartplotter. A GSD 21 cannot be wired to a GPSMAP 4000 series chartplotter.

- Share data from Garmin Marine Network devices connected to any chartplotter in the Marine Network or a GMS 10 Marine Network Port Expander with every other chartplotter connected to the Marine Network. These devices include:
  - **GSD 22 digital sounder**— provides sonar data when connected to the Garmin Marine Network and an appropriate transducer. Sonar data is shared by all chartplotters on the network.
  - **GMR 21/41 Radome; GMR 18 Radome; and GMR 404/406 Open Array Radar**—provide radar data when connected to the Garmin Marine Network. Radar data is shared by all chartplotters on the network.
  - **GDL 30/GDL 30A**—provides XM Weather and XM Radio data when connected to the Garmin Marine Network. XM Weather data is shared by all chartplotters on the network. Connect the GDL 30A (GDL 30A only - the GDL 30 unit provides only weather) to the audio input source on your boat to listen to XM audio. The station can be changed by any chartplotter on the network.

**NOTE:** Currently, the XM Satellite service is only available in North America. Any functions of the GDL 30/30A will only function when used in North America.

- Share BlueChart g2 Vision cartography data from an SD card inserted in one GPSMAP 4000/5000 series chartplotter with every GPSMAP 4000/5000 series chartplotter connected to the Marine Network.

**NOTE:** BlueChart g2 Vision cartography is only compatible with GPSMAP 4000/5000 series chartplotters. Previous Garmin Marine Network compatible chartplotter models (such as the GPSMAP 3010) can be connected to your network, but they cannot share BlueChart 2g Vision data.

- Transfer waypoint, route and track information from one chartplotter connected to the Garmin Marine Network to every other chartplotter connected to the Marine Network. The data can be cloned from one chartplotter to every other connected chartplotter, or the data from every chartplotter can be merged and shared with every connected chartplotter.

## Viewing Connected Garmin Marine Network Devices

To view all connected Garmin Marine Network Devices, from the Home screen, select **Configure > System > System Information > Network Devices**.

**Network Devices**

Each connected device is listed along the right side of the screen. To assign an alias, or name to one of the devices for identification purposes, select the device. Use the **ROCKER** (or the **NUMERIC KEYPAD** on the 4012 and 4212) to name the device.

Select Back or press the **HOME** button to exit.

# USING RADAR

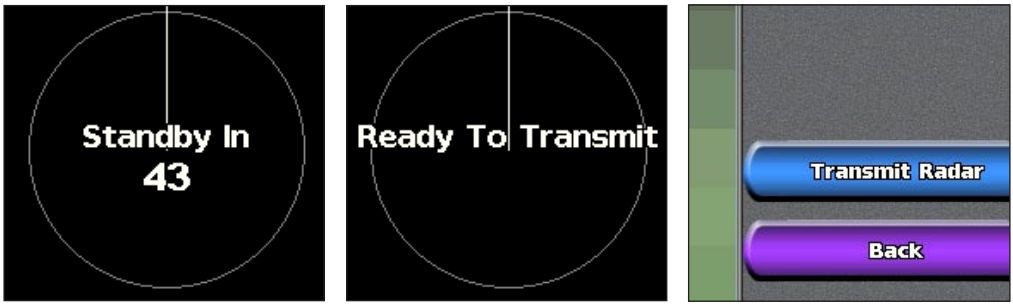
When connected to an optional Garmin Marine Radar such as a GMR 404/406 or GMR 18, you can view more information about your surroundings. The radar connects through the Garmin Marine Network and shares radar data with every chartplotter connected to the network.

The Garmin Marine Radar transmits a narrow beam of microwave energy as it rotates in a 360 pattern. When the transmitted energy contacts a target, some of that energy is reflected back to the radar. You choose how to display the received data on the chartplotter.

**WARNING:** The marine radar transmits microwave energy that has the potential to be harmful to humans and animals. Before beginning radar transmission, verify that the area around the radar is clear. The radar transmits a beam approximately 12° above and below a line extending horizontally from the center of the radar. Avoid looking directly at the radar, because the eyes are the most susceptible part of the body.

### Turning on the Radar:

1. When you power on the network, the radar warms up. A countdown is provided to alert you when the radar is ready. From the Home screen, press **Radar > Cruising**.
   - As a safety feature, the radar enters standby mode after it warms up. This gives the operator an opportunity to verify that the area around the scanner is clear before beginning radar transmission. It is important to remember that the microwave energy transmitted by the scanner can potentially be dangerous.
2. When the message “Ready to Transmit” appears in the center of the radar display, press and release the **POWER** button on the chartplotter (do not hold the button, or you may shut down the chartplotter.), or press **MENU**.
3. On the bottom right of the screen, select **Transmit Radar**. A “Spinning Up” message will appear for a few moments, then the radar begins painting an image.

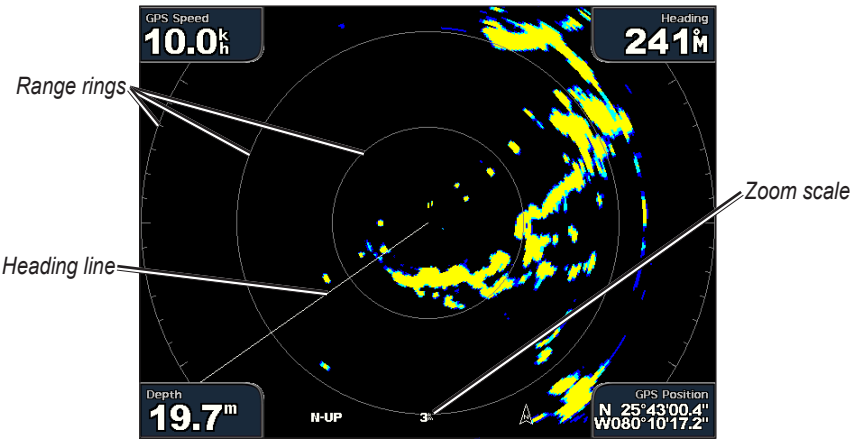



### Turning off the Radar:

1. When you would like to stop transmitting with the radar, press and release the **POWER** button on the chartplotter (do not hold the button, or you may shut down the chartplotter.), or press **MENU**.
2. On the bottom right of the screen, select **Go To Standby**.

## Understanding the Cruising Screen

Use the Cruising screen to view a full-screen image of the gathered radar information. Your position is in the center of the screen, and the rings provide distance measurements.




**Radar - Cruising Screen**

The zoom scale represents the distance from your position (the center) to the outermost ring. Each ring represents an even division of the zoom scale. For example, if the zoom scale is set at three kilometers or miles, each ring represents one kilometer or mile from the center out. Adjust the zoom scale by using the **RANGE** (+/-) keys.

### *Cruising screen settings*

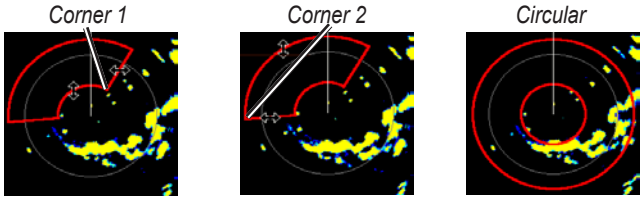
To access additional settings or options for the radar cruising screen, press **MENU.**

**Gain—**controls the sensitivity of the radar receiver. The default setting, Auto, adjusts automatically to provide optimal performance. You can also set the gain manually. When you select **Gain**, select **Up** or **Down** (or use the **RANGE** or **ROCKER** keys) to manually adjust the gain. Select **Auto** to return the gain to the default setting.

- Select **Rain Cltr** to adjust the gain for unwanted clutter caused by rain at close ranges. Select **Up** or **Down** (or use the **RANGE** or **ROCKER** keys) to adjust the rain clutter sensitivity.
- Select **Sea Cltr** to adjust the gain for clutter caused by choppy sea conditions. Select **Nxt Prset** to cycle between Rough, Med, Calm, or Off. You can also select **Up** or **Down** (or use the **RANGE** or **ROCKER** keys) to manually adjust the sea clutter sensitivity.

**Guard Zone—**defines a safe zone around your boat. An alarm will sound when a detected object enters this zone. Select **On** or **Off**. If the guard zone is on, you can define the boundaries by selecting **Adjust Guard Zone:**

- **Corner 1** (and **Corner 2**): Use the **ROCKER** as indicated by the arrows ( and ) to define the size of the guard zone. Select **Corner 1** or **Corner 2** to change the reference point.
- **Circular**: Joins the guard zone to completely encompass the boat. Use **Corner 1** or **Corner 2** to adjust the size.

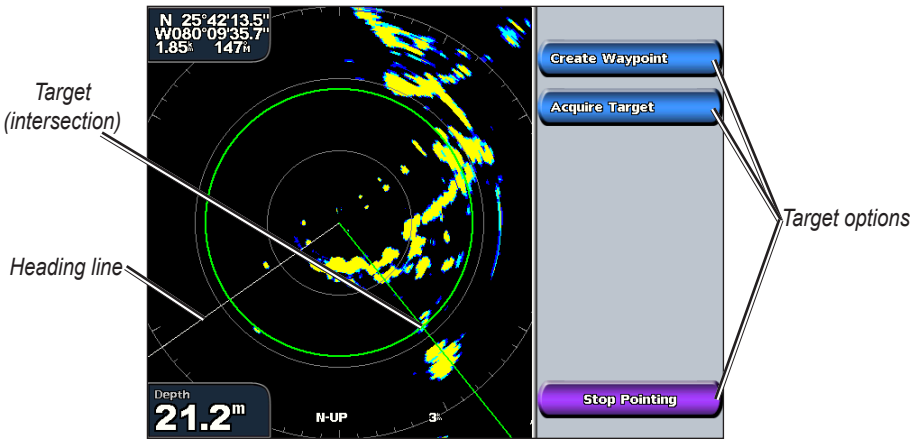



**Overlay Numbers**—show or hide cruising, navigation, or fishing numbers just as on the navigation chart (page 8).

**Radar Setup**—advanced radar settings. See page 48.

### *Targeting on the cruising screen*

Use the **ROCKER** while viewing the cruising screen to begin targeting. A green ring and a green line appear to help you judge the distance and bearing of targeted objects. The green ring corresponds with the range rings to help define an object's distance from your position, and the green line corresponds with the heading line to help define an object's bearing from your position. As you move the **ROCKER**, you adjust the point where the the green ring and green line intersect. This point indicates your target. As you move the target over objects on the radar, target options appear along the right side of the screen.




**Cruising Screen - Targeting**

To stop targeting, select Stop Pointing on the bottom right side of the screen, otherwise select an option:

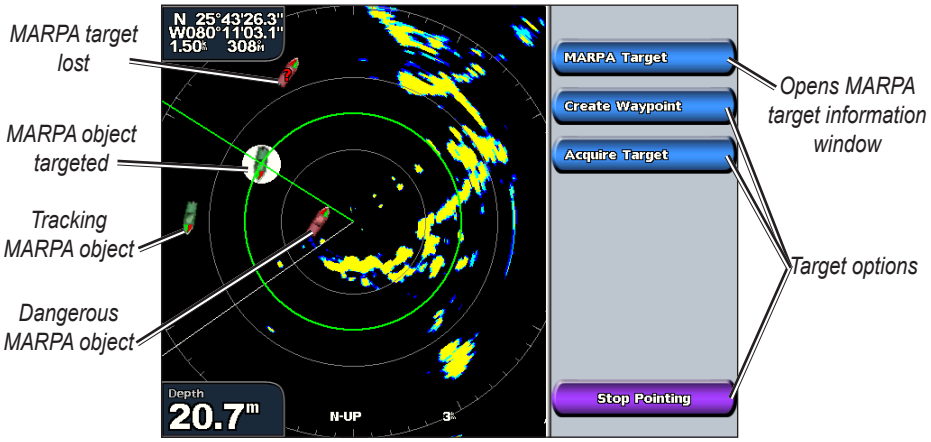
## Target Options

**Create Waypoint—**marks a waypoint at the targeted object or location.

**Acquire Target—**assigns a MARPA (Mini Automatic Radar Plotting Aid) tag to the targeted object.

**NOTE:** MARPA requires the use of a heading sensor. The heading sensor must output the NMEA 0183 sentence HDM or HDG.

**MARPA Target** (only appears when you are targeting a tagged MARPA object)—opens the MARPA target information window. Remove MARPA objects from this window.

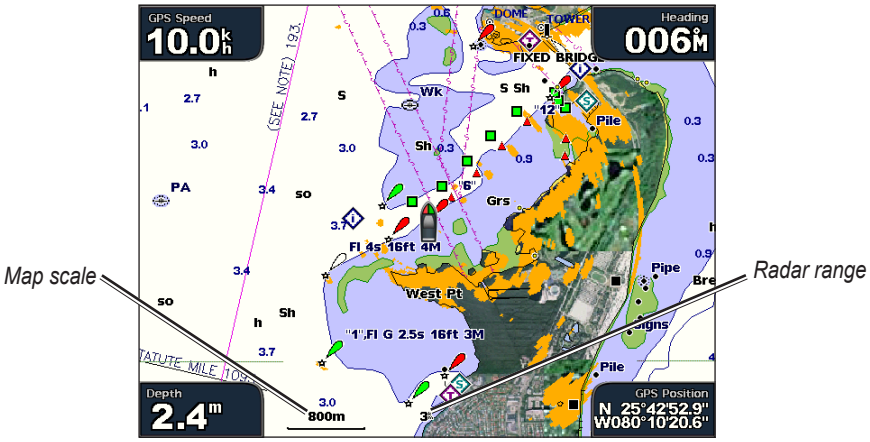



**MARPA Targeting**

## Understanding the Radar Overlay Screen

The radar overlay screen places the radar picture directly onto the navigation chart.

To access the radar overlay screen, from the Home screen select **Radar > Radar Overlay**.




**Radar Overlay Screen**

The radar picture appears in orange and overlays the navigation chart. Use the **RANGE** (+/-) keys to zoom in and out:

- Zooming while panning the map will only effect the zoom scale of the map - the radar range remains the same.
- Zooming while the map is locked on the boat (not panning) will effect the zoom scale of the map as well as the radar range. When you reach the limit of the radar range, the screen will not zoom out further.

### *Radar overlay screen options*

To access additional settings or options for the radar overlay screen, press **MENU.** There are two sets of options you can access, radar or chart. The radar setup options are the same as the radar cruising screen (page 44). Select **Adjust Chart** to access the chart options. The chart options are the same as the navigation chart (page 12). Select **Adjust Radar** to return to the radar setup options.

## Radar Setup

To change radar settings, from the Home screen, select **Radar** > **Radar Setup**, or press **MENU** while viewing the radar cruising screen or radar overlay screen and select **Radar Setup**.

**Orientation**—changes the perspective of the radar display:

- **Heading Up**—sets the radar display to the current track heading.
- **North Up**—sets the top of the radar display to a north heading.
- **Course Up**—sets the radar display so the direction of navigation is always up. The heading line will appear vertically on the screen if it is shown.

**Heading Line**—shows or hides a line in the direction of travel.

**Rings—**shows or hides the radar range rings.

**Look-Ahd Spd—**enable this to shift your current position towards the bottom of the screen as your speed increases. Enter your top speed for the best results.

**Timed Xmit**—sets and customizes a transmit/standby cycle. Define the transmission time (**Xmit Time**) and standby time (**Stdby Time**) in minutes.

**Xtalk Reject** (Crosstalk)—filters out interference caused by another radar operating in close proximity.

**Advanced**—opens a menu of advanced settings:

- **FTC** (Fast Time Constant)—Set to High, Medium, Low, or Off. This helps reduce unwanted clutter caused by rain at a distance.
- **Front of Boat**—allows you to offset the front of the boat if you mount the radar at an angle.
- **Antenna Size** (GMR 404/406 only)—allows you to select the size of your antenna (4 Foot or 6 Foot).
- **Motor Speed** (GMR 404/406 only)—allows you to set the motor speed of your GMR 404/406 radar to Normal Speed or High Speed. High Speed increases the speed at which the antenna rotates, which increases the speed at which the screen updates.

# Using Sonar

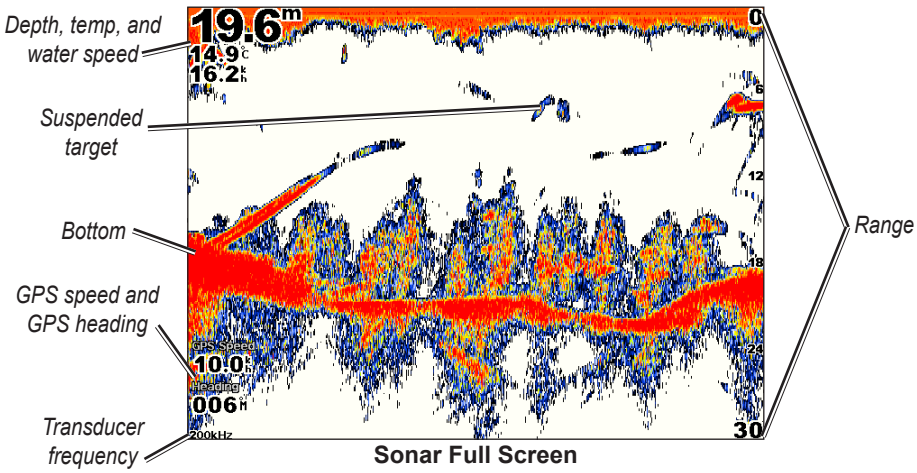
When connected to an optional sounder module such as the GSD 22 and a transducer, your unit becomes a powerful fishfinder. The sounder module connects through the Garmin Marine Network and shares sonar data with every chartplotter connected to the network.

With the GPSMAP 4000 series unit, you can view sonar in different ways, depending on the type of transducer you are using. Press **Sonar** from the Home screen to view the available choices:

## Understanding the Full Screen

Use the **Full Screen** to view a full-screen graph of the transducer's sonar readings. The range scale along the right side of the screen shows the depth of detected objects as the screen scrolls from the right to the left.

On the Home screen, select **Sonar** > **Full Screen**.

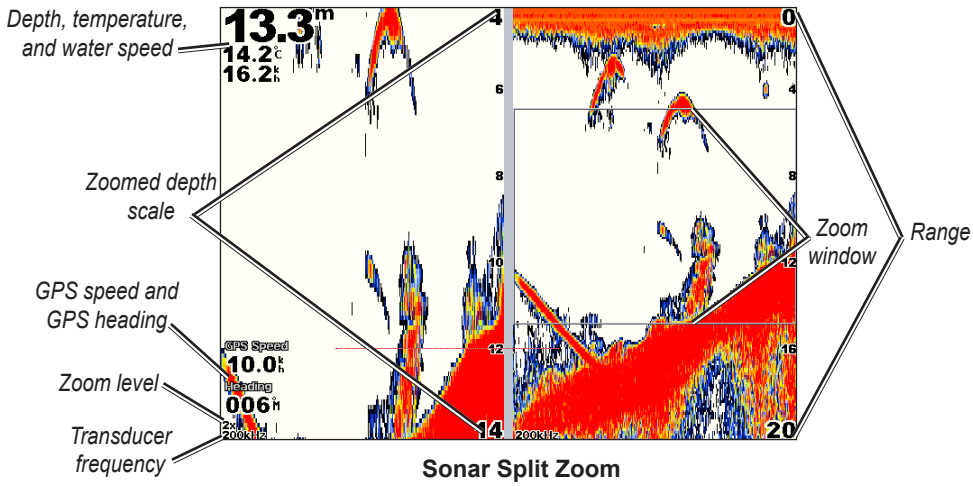



Sonar Full Screen

## Understanding the Split Zoom Screen

Use the Split Zoom screen to view the full sonar data from the graph and a zoomed in portion on the same screen.

From the Home screen, select **Sonar** > **Split Zoom**.

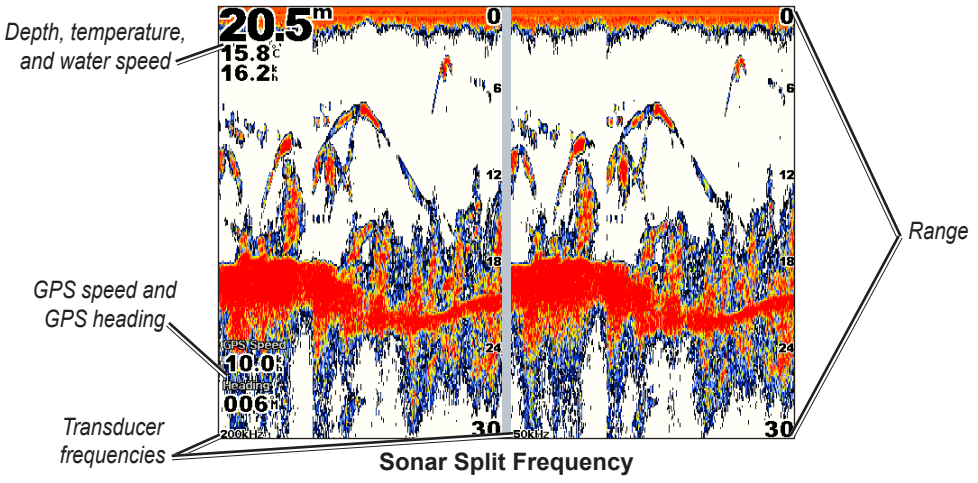



Sonar Split Zoom

## Understanding the Split Frequency Screen

Use the Split Freq screen (dual frequency transducer only) to view both the 50kHz and 200kHz frequencies on the same screen. A 200kHz frequency graph appears on the left; a 50kHz frequency graph appears on the right.

From the Home screen, select **Sonar** > **Split Frequency**.

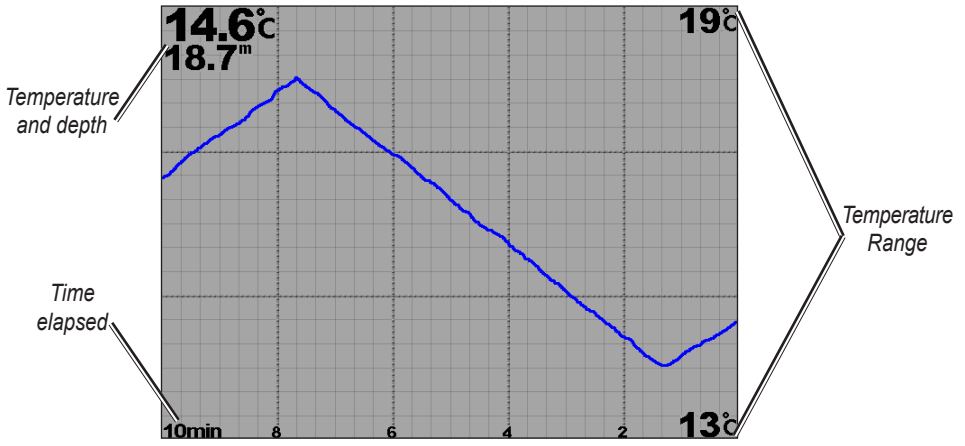



Sonar Split Frequency

## Understanding the Temp Log

If you are using a temperature-capable transducer, the Temp Log screen keeps a graphic log of temperature readings over time. The current temperature and depth are shown in the top-left corner.

From the Home screen, select **Sonar** > **Temp Log**.




Transducer Temperature Log

The temperature appears along the right side and the time elapsed appears along the bottom. The graph scrolls to the left as information is received.

## Setting Up Sonar

Use the Sonar Setup screen to define and adjust settings universal to all sonar screens.

From the Home screen, select **Sonar** > **Sonar Setup**.

**Color Scheme**—choose white or blue. This affects the background on all sonar screens, but does not change the Temp Log screen.

**Fish Symbols**—set how the sonar interprets suspended targets.

The unit does not interpret the sonar return data (default).

Suspended targets appear as symbols. Background sonar information appears, making the distinction between fish and structure easier.

Suspended targets appear as symbols with background information shown. The target depth of each symbol is also indicated.

Suspended targets appear as symbols. No background information appears.

Suspended targets appear as symbols with no background information shown. The target depth of each symbol is indicated.

**Scroll Speed**—adjust the rate at which the sonar scrolls from right to left (**Ultrascroll**, **Fast**, **Medium**, or **Slow**). If using a speed-capable transducer, select **Auto** to have the scroll speed automatically adjust to your boat's water speed.

**Surface Noise**—show or hide the sonar returns near the surface of the water. Hide surface noise to help reduce clutter.

**Whiteline**—highlights the strongest signal from the bottom to help identify its hardness or softness.

- **Off**—(default) Whiteline is disabled.
- **High**—the most sensitive setting. Almost all strong returns are highlighted in white.
- **Medium**—many strong returns are highlighted in white.
- **Low**—the least sensitive setting. Only the strongest returns are highlighted in white.

**Overlay Numbers**—show or hide battery voltage, water temperature, water speed (if your transducer is capable), cruising, and navigation.

**NOTE:** To show water temperature or water speed, change the setting to **Auto**. If the connected transducer is capable, the data is shown.

## Advanced Sonar Settings

To adjust advanced sonar settings, press **MENU** while viewing a sonar screen.

**Range**—the range of the depth scale on the right side of the screen (**Auto** or **Manual Range)**.

**Gain**—controls the sensitivity of the sonar receiver (**Auto** or **Manual Gain**). To see more detail, increase the gain. If the screen is cluttered, decrease the gain.

**Frequency**—when using a dual frequency transducer, select how the frequencies appear on screen (**200kHz**, **50kHz**, **Dual,** or **Auto**).

**Zoom**—zoom in to a section of the Full Screen. The zoom is off, or set to **No Zoom**,by default. Four options are available:

- **2x Zoom**—twice the magnification.
- **4x Zoom**—four times the magnification.
- **Bottom Lock**—locks the zoom window to the bottom.
- **Split Zoom**—opens the Split Zoom screen.

**Depth Line—**quickly reference a specific depth (**On** or **Off**).

**A-Scope** (dual frequency only)**—**a vertical flasher along the right side of the screen (**On** or **Off**).

**Sonar Setup**—opens the Sonar Setup screen. See page 51.

# Using XM WX Weather and Audio

In order to use XM Weather, you must have a Garmin GDL 30 or 30A XM receiver and an activated XM weather subscription. To use XM Audio, you must have the Garmin GDL 30A XM receiver and an XM Audio subscription. To connect the XM antenna and receiver and for subscription instructions, refer to the *GDL 30/30A Marine Weather Satellite Receiver Installation Instructions*.

If you do not have a receiver and a subscription to XM WX Weather, the weather features described in this section work only when the unit is in Simulator Mode.

## Using XM WX Weather

The GDL 30/30A receives XM WX Weather data and shows it on your unit's Navigation chart and other screens throughout the unit. The weather data for each feature comes from reputable weather data centers such as the National Weather Service and the Hydrometerological Prediction Center. (See the XM WX Satellite Weather Web site at http://weather.xmradio.com/weather for more information.)

**NOTE:** Any weather feature can change in appearance or interpretation if the source that provides the information changes.

XM WX Weather data is broadcast at set rates. For example, NEXRAD (**NEX**t Generation Weather **RAD**ar) data is broadcast at five minute intervals. When the Garmin unit is turned on or when a new feature is selected, the GDL 30/30A has to receive new data before it can be shown. You might experience a delay before weather data or a new feature appears on the map.

## Setting the XM WX Weather Options

To configure the weather settings from the Home screen, select **Weather** > **Weather Setup**. From this menu, you can turn the **NEXRAD Loop** on or off and hide or show the weather **Legend**.

## Viewing Precipitation Information

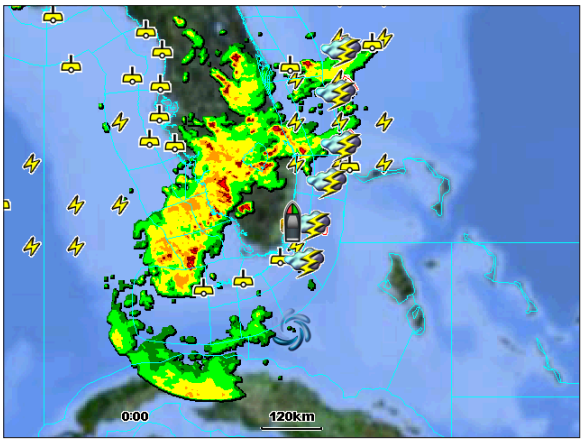
Precipitation shows NEXRAD radar, storm cells, lighting strikes, and hurricane warnings. To view precipitation from the Home screen, select **Weather** > **Precipitation**.

### *Viewing NEXRAD Radar Information*

NEXRAD shows precipitation from very light rain and snow up to strong thunderstorms in varying shades and colors. On the GPSMAP 4000 series unit, you can view NEXRAD information as an image of the latest update, or as an animated loop of the latest updates. To animate the NEXRAD loop, from the Home screen, select **Weather** > **Weather Setup** > **NEXRAD Loop** > **On**.

In the lower-left corner of the screen is a Time Stamp. The Time Stamp displays the elapsed time since the National Weather Service last updated the information.

To view the weather legend from the Home screen, select **Weather** > **Weather Setup** > **Legend** > **Show**. NEXRAD is shown independently or with a variety of other weather information.

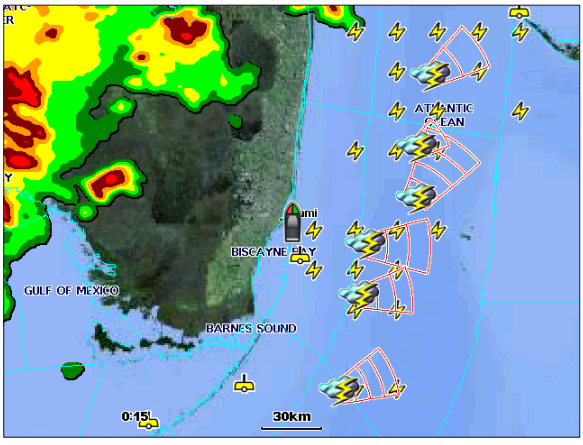



To turn cloud cover on or off, select **Menu** > **Cloud Cover** > **Hide** or **Show**.

### *Understanding Storm Cell Information*

The storm cells show storms as well as the storm's projected path in the immediate future.

The direction of the red cone indicates the projected path of the storm cell. The red bars that appear in the cone indicate where the storm will most likely be in the future. Each bar represents 15 minutes.

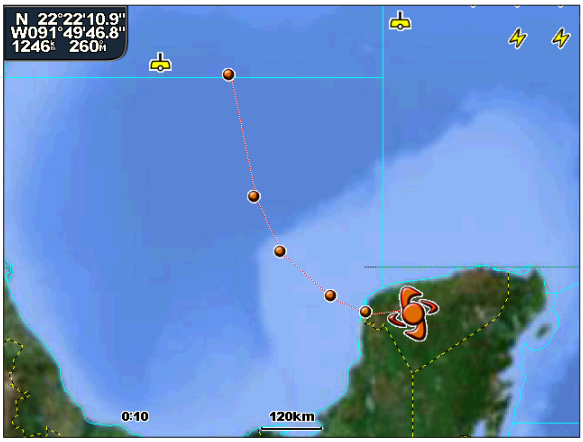



### *Understanding Lightning Information*

Lightning strikes are represented by lightning bolt icons. Lightning appears on the map if strikes were detected within the last seven minutes. The ground-based lightning detection network only detects cloud-to-ground lightning.

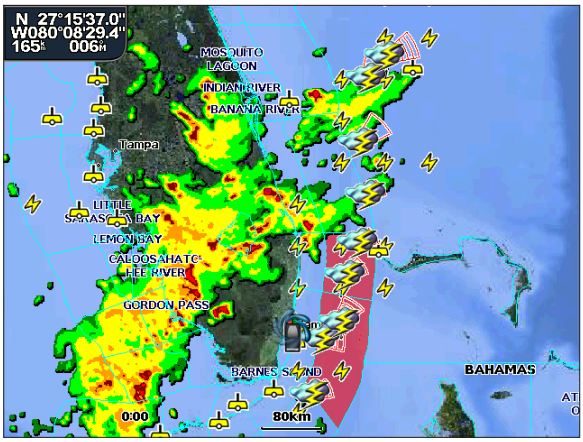
## Understanding Hurricane Information

The Hurricanes feature shows the current position of a hurricane, tropical storm, or tropical depression, as well as its projected path (indicated by a red line). The darkened dots that appear along the red line display the projected locations received from the National Hurricane Center. The center provides four forecasts at 12-hour intervals as well as a fifth forecast at a 24-hour interval.



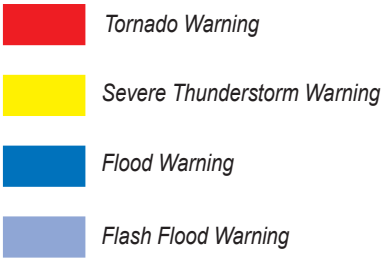

## Understanding Marine Warnings

When a Marine Warning is issued, the area for the warning is highlighted in red. To view information about the warning, select the warning area. The light blue lines on the chart indicate marine weather warning zones.



### *Understanding County Warnings*

When the National Weather Service issues a weather warning for a county, the county is highlighted with the color corresponding to the warning. To view information about the warning, select the county with the pointer by using the ROCKER.

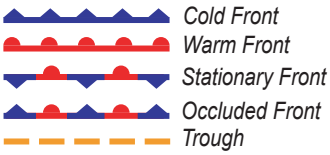



## Viewing Forecast Information

Forecasts show the weather conditions including fronts and precipitation. To view the forecast for another time period, select **Menu** > **Next Forecast**. The forecasted weather for the next 12 hours is displayed. Continue to select **Next Forecast** to view forecasts for the next 24, 36, and 48 hours. To view forecast information for another location, use the pointer to pan the map until the location is displayed.

### *Understanding Fronts*

The Fronts show lines indicating the leading edge of an air mass. This feature also shows pressure centers. Pressure centers are represented by a large Red "L" for low pressure centers or a large Blue "H" for high pressure centers. Pressure centers represent an area where pressure is measured to be either the highest or lowest relative to the surrounding area.



Indicates a Low Pressure Center. A Low Pressure Center is an area where the measured pressure is lowest relative to the surrounding area. Moving away from a Low Pressure Center in any horizontal direction results in increased pressure. Winds flow counterclockwise around Low Pressure Centers in North America.

Indicates a High Pressure Center. A High Pressure Center is an area where the measured pressure is highest relative to the surrounding area. Moving away from a High Pressure Center in any horizontal direction results in decreased pressure. Winds flow clockwise around High Pressure Centers in North America.

### *Understanding City Forecasts*

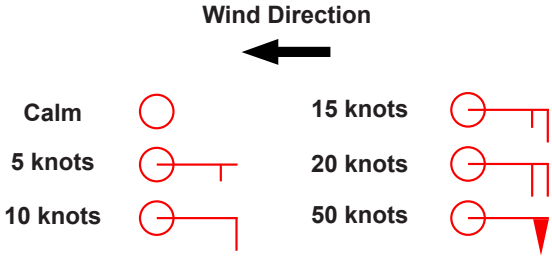
City forecasts appear as standard weather symbols. The forecast is viewed in 12-hour increments for the next 48 hours.

## Viewing Sea Conditions

Sea Conditions provide surface conditions including winds, wave height, wave period, and wave direction.

### *Understanding Surface Winds*

Wind barbs indicate from which direction the wind is coming. The wind barb is a circle with a tail. Wind speed is indicated by the different combination of flags that are attached to the tail.




### *Understanding Wave Height*

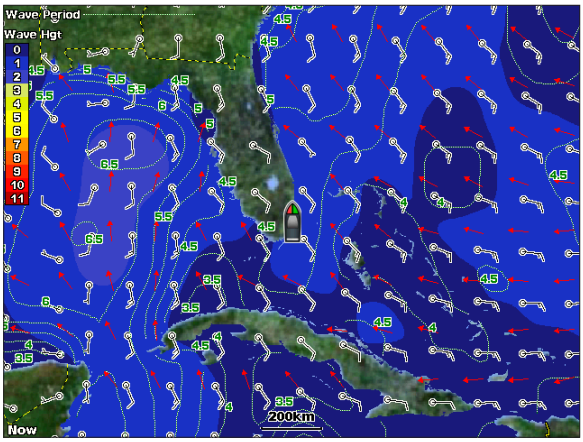
The Wave Height feature shows wave heights. The wave heights for an area are shown in color intensities.

### *Understanding Wave Period*

The Wave Period feature provides the time (in seconds) between successive waves.

### *Understanding Wave Direction*

The Wave Direction feature shows the direction in which a wave is moving, as indicated by the direction of the red arrow.




## Viewing Fishing Information

The Fishing view contains current water temperature and surface pressure conditions.

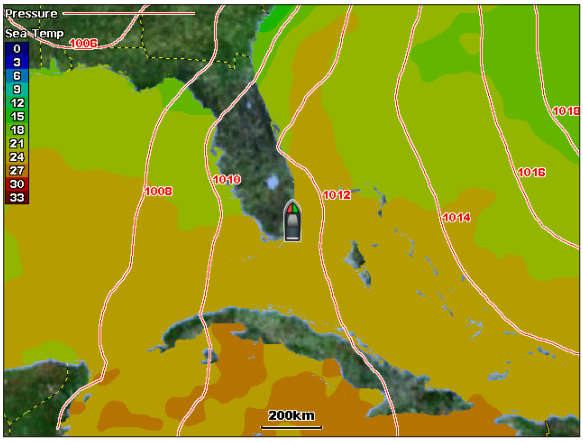
### *Understanding Surface Pressure*

This feature displays pressure isobars and pressure centers. The isobars connect points of equal pressure. Pressure readings can help determine weather and wind conditions in an area. High pressure areas are generally associated with fair weather. Low pressure areas are generally associated with clouds and the chance of precipitation. Isobars packed closely together show a strong pressure gradient. Strong pressure gradients are associated with areas of stronger winds.

Pressure units are shown in Millibars (mb), Inches of Mercury (in), and Hectopascals (hPa).

### *Understanding Water Temperature Data*

The Water Temperature feature displays the water's surface temperature, as indicated by the legend on the left of the screen. The temperature breaks are indicated by isotherm lines.

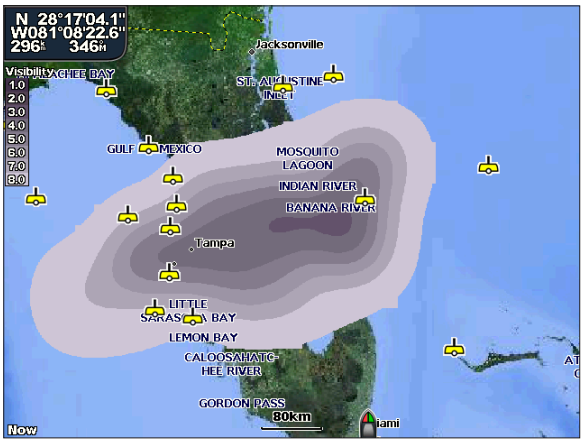



### *Viewing Fish Forecasting*

To view areas that contain optimal weather conditions for specific species of fish, from the Home screen, select **Weather** > **Fishing** > **Menu**, and select a species of fish. Shaded areas indicate optimal fishing areas for that species.

## Viewing Visibility Information

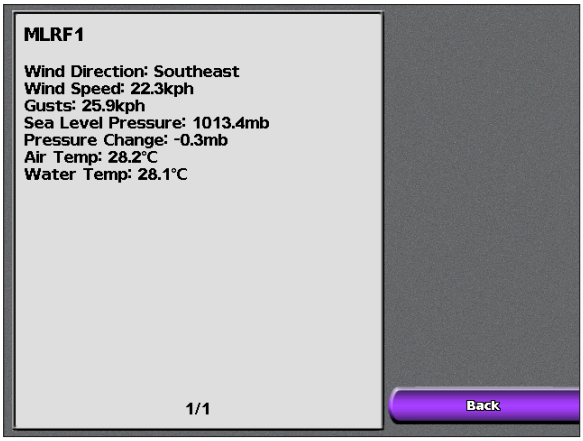
Visibility is the forecast maximum horizontal distance that can be seen at the surface, as indicated by the legend on the left of the screen. Contour lines on the Visibility feature show the forecasted change in surface visibility.




## Viewing Buoy Reports

Report readings are taken from buoys and coastal observation stations. These readings are used to determine air temperature, dew point, water temperature, tide, wave height and period, wind direction and speed, visibility, and barometric pressure.

To view a buoy report, select a buoy on the screen. Select **Buoy**.




## Using XM Audio

When a GDL 30A is connected to the Garmin Marine Network and to the audio input of your boat, you can listen to XM Audio channels.

### *Selecting an XM Audio Channel*

To access XM Audio from the Home screen, select **Configure** > **XM Audio**. Channels appear along the right side of the screen. Select a channel or select **Next Page** or **Previous Page** to see more channels.

### *XM audio settings*

To access the audio settings, select **Menu**.

**Save Preset**—save the currently playing channel as a preset. You can save 15 preset channels. The saved preset channels are shared by all chartplotters on the network.

**Category**—change the audio category to view just the channels in a specific genre of music, sports, or news.

**Channel Entry**—manually enter a channel number for quick access.

**Mute**—mutes the audio output from the GDL 30A.

# APPENDIX

## Specifications

### *Physical Specifications*

**Size:** GPSMAP 4008/4208: 7" H x 11.2" W x 4.2" D (176.9 x 284.4 x 106 mm)
GPSMAP 4012/4212: 9.5" H x 14.8" W x 4.13" D (240.5 x 375 x 105.1 mm)
**Weight:** GPSMAP 4008/4208: 6 lbs (2.72 kg)
GPSMAP 4012/4212: 10 lbs (4.5 kg)
**Display:** GPSMAP 4008/4208: 5.17" H x 6.85" W (131.4 x 174 mm)
GPSMAP 4012/4212: 7.3" H x 9.7" W (184.3 x 245.8 mm)
**Case:** Fully Gasketed, high-impact plastic and aluminum alloy, waterproof to IEC 529-IPX-7
**Temp. Range:** 5° to 131° F (-15° to 55° C)
**Compass Safe Distance:** GPSMAP 4008/4208: 2.6' (80 cm)
GPSMAP 4012/4212: 3.28' (1 m)

### *GPS Performance (with GPS 17)*

**Receiver:** Differential-ready 12 parallel channel WAAS-capable receiver
**Acquisition Times:**
**Warm:** 15 seconds
**Cold:** 45 seconds
**AutoLocate:** 2 minutes
**Update Rate:** 1/second, continuous
**GPS Accuracy:**
**Position:** <15 m (49 ft), 95% typical
**Velocity:** 0.05 meters/second steady state
**WAAS Accuracy:**
**Position:** <3 m (9.8 ft), 95% typical
**Velocity:** 0.05 meters/second steady state
**Dynamics:** 6gs

### *Power:*

**Source:** 10-35 VDC
**Usage:** 4008/4208: 35 W max. at 10 VDC
4012/4212: 40 W max at 10 VDC
**Fuse:** 7.5 A, 42 V fast-acting

### *NMEA 2000 Specifications:*

**Load Equivalency Number (LEN):** 2

**Unit Draw:** 75 mA max

## Initializing Unit Settings

The first time you turn your unit on, you must configure a series of initial settings. These settings must also be configured when restoring factory settings (page 4).

**NOTE:** All of these settings can be configured later from the **Configure** screen.

The initial settings are as follows:

**Language**—select the language that will be shown on your screen.

**Welcome**—select **OK**.

**Any NMEA devices?**—select **Yes** if NMEA devices are or will be connected.

**AIS Connection** (shown if answer to **Any NMEA devices** was **Yes**)—select the type of AIS devices that are or will be connected to the unit. See page 40 for more detailed information.

**Position Format**—specify the coordinate system that you want location readings to appear in.

**Time Format**—specify whether you want the time shown in a **12-hour**, **24-hour**, or **UTC** (Universal Time Code) format

**Time Zone**—specify your time zone.

**Units**—specify units for onscreen measurements as **Statute**, **Metric**, or **Nautical**.

**Minimum Safe Depth**—specify the minimum safe depth for your boat. Refer to your boat specifications for more information.

**Minimum Overhead Clearance**—specify the minimum overhead clearance for your boat. Refer to your boat specifications for more information.

**Zone Alarm** (shown if an **AIS Connection** is indicated)—select **Yes** if you want to set zone alarms (page 40)

**Zone Distance** (shown if answer to **Zone Alarm** is **Yes**)—select the estimated distance of collision within which you would like a zone alarm to sound (page 40).

**Zone Time** (shown if answer to **Zone Alarm** is **Yes**)— select the estimated time of collision within which you would like a zone alarm to sound (page 40).

## Messages and Alarms

**Accuracy Alarm (GPS)**—the GPS accuracy has fallen outside the user-set value.
**AIS: Dangerous Target**—an AIS target currently presents a collision threat.
**Alarm Clock**— the alarm clock alarm has sounded.
**Anchor Drag Alarm**—boat has drifted out of the user-set distance range.
**Antenna Input is Shorted**—there is a short in the wiring to the GPS 17 antenna.
**Approaching Waypoint <name>**—boat is a specified alarm distance from the destination waypoint.
**Arrival Alarm <name>**—arriving at destination waypoint.
**Auto-guidance unable to calculate route**—(BlueChart g2 Vision) auto-guidance cannot calculate the route.
**Auto-guidance unable to calculate route, please shorten route**—(BlueChart g2 Vision) auto-guidance cannot calculate the route, choose closer end point.
**Auto-guidance unable to calculate route. Starting position not within safe depth**—(BlueChart g2 Vision) auto-guidance cannot calculate the route; travel to water within the specified safe depth.
**Auto-guidance unable to calculate route. Ending position not within safe depth**—(BlueChart g2 Vision) auto-guidance cannot calculate the route; choose an end point within the specified safe depth
**Battery Alarm**—Battery voltage is at or below the user-set value.
**Boat is not Moving Fast Enough to Calibrate**—(speed sensor) appears during water speed calibration. Check speed wheel for blockage and calibrate again. If wheel is clear, calibrate again and increase speed.
**Can't Read User Card**—cannot read card when attempting a user data transfer.
**Can't Read Voltages That High, Limited To Top Of Range**—entering a battery alarm voltage higher than the unit can read.
**Can't Read Voltages That Low, Limited To Bottom Of Range**—entering a battery alarm voltage lower than the unit can read.
**Can't Unlock Maps**—maps are locked and cannot be used on this unit.
**Can't Write User Card**— cannot write card when attempting a user data transfer.
**Card Needed**—user data transfer - insert an SD card.
**Cartography Service Incompatible. Software Update Required**—a software update is needed. Contact product support for assistance updating your unit software.
**Database Error**—general database error. Contact product support.
**Deep Water Alarm**—(sonar) boat has entered user-defined value for deep water.
**Distress Call Received From <name>**—A distress call has been received by the DSC module.
**Drift Alarm**—boat has moved a user-defined distance.
**DSC Position Report Received From <name>**—a position report has been received by the DSC module.
**Entering Target Water Temperature**—(temperature sensor/transducer) the water temperature is inside the user-defined target temperature zone.
**Flash Flood Warning Alarm**—(XM weather) there is a flash flood warning effective.
**Flood Warning Alarm**—(XM weather) there is a flood warning effective.
**Leaving Target Water Temperature**—(temperature sensor/transducer) the water temperature is outside the user-defined target temperature zone
**Low Fuel Alarm**—(NMEA 2000) low fuel reported by the NMEA 2000 network.
**Fuel Tank Calibration Needed**—(NMEA 2000) fuel was added to the fuel tank and therefore the system needs to be calibrated.
**GPS Antenna Has Lost Its Stored Settings**—The GPS antenna's memory has been cleared somehow. Contact product support.

**GPS Service Incompatible. Software Update Required**—a GPS service software update is needed. Contact product support for assistance updating your unit software.
**GPS Service Lost**—the unit has lost communications with the remote GPS unit. Check the network and the antenna wiring.
**Incompatible Device, Software Update Required**—an incompatible device is attached that requires a software update. Contact product support for assistance updating your network.
**Invalid Device Instance. Enter a number between (0 - 252)**—invalid NMEA 2000 Device instance.
**Invalid System Instance. Enter a number between (0 - 15)**—invalid NMEA 2000 System instance.
**Lost Heading Sensor Connection**— (radar/NMEA) the unit has lost communications with the heading sensor. Check wiring.
**Lost Remote GPS Connection**—lost connection to the remote GPS. Check the network and the antenna wiring.
**Lost Satellite Reception**—the unit has lost satellite reception. Make sure you have a clear view of the sky.
**Map Format Is Not Supported**—a map format on a preprogrammed SD card is not supported.
**MARPA: Dangerous Target**—(radar) a MARPA target has become dangerous.
**MARPA: Target Lost**—(radar) unable to track a marpa target any longer.
**Marine Weather Warning**—(XM weather) there is a weather warning in effect.
**NMEA Depth Is Below Transducer**—(sonar) the NMEA depth input is using the DBT sentence which does not include keel offset.
**No DGPS Position**—unit lost differential GPS reception (WAAS). Make sure you have a clear view of the sky.
**No Proximity Waypoints Found**—no proximity waypoints found while attempting a user data transfer.
**No Routes Found**—no routes found while attempting a user data transfer.
**No Tracks Found**—no tracks found while attempting a user data transfer.
**No User Waypoints Found**—no user waypoints found while attempting a user data transfer.
**No XM Signal**—(XM weather) no XM satellite signal detected. Make sure you have a clear view of the sky.
**Not All Maps Fit, Some Maps Will Not Be Drawn**—there are more maps present on the SD card than the unit can support. Some of the maps on the card will not be drawn or used to find map features.
**Off Course Alarm**—the boat has left the user-defined course.
**Please insert card**—appears if you attempt to use a feature that requires an SD card.
**Proximity Alarm**—the boat has come close to a user-defined proximity point.
**Proximity Alarm Memory is Full**—the proximity waypoint memory is full. Erase existing proximity waypoints to make room.
**Radar Guard Zone Alarm**—(radar) an object has been detected in the user-defined radar guard zone.
**Radar Needs Repair Error Code**—(radar) the radar needs repair. An error code will be listed to help diagnose the error.
**Radar Service Incompatible. Software Update Required**—a radar software update is needed. Contact product support for assistance updating your network.
**Radar Service Lost**—(radar) the unit has lost communications with the remote radar unit. Check the network and the radar wiring.
**Route Already Exists**—the named route already exists. Choose another name.
**Route is Full**—the individual route is full, no more waypoints can be added.

**Route Memory is Full, Can't Create Route**—the unit's Route memory as a whole is full, no more routes can be created. Erase existing routes to make room.
**Route Truncated**—some points on the end of the route have been discarded.
**Severe Storm Warning**—(XM weather) there is a severe storm warning in effect.
**Shallow Water Alarm**—(sonar) the boat has entered the user-defined shallow water depth.
**Simulating Operation**—the unit is in simulator mode.
**Sonar Failed, Unit Needs Repair**—there has been a sonar failure and the unit needs to be sent in for repair. Contact product support.
**Sonar Service Incompatible. Software Update Required**—a software update is needed. Contact product support for assistance updating your network.
**Sonar Service Lost**—(sonar) the unit has lost communications with the remote sonar unit. Check the network and the sonar wiring.
**The position format that is selected is associated with this map datum**—map datum restriction explanation.
**Tide Alarm**—tide has reached user-specified tide alarm range.
**Tornado Warning Alarm**—(XM weather) a tornado warning is in effect.
**Track Already Exists**—the named track already exists. Choose another name.
**Track Log Full**—there is no longer any space in the active track log storage.
**Track Truncated**—some points on the end of the track have been discarded.
**Transducer Disconnected, Sonar Turned Off**—the transducer has been disconnected. Sonar has been turned off. Check transducer wiring.
**Transfer Complete**—user data transfer is complete.
**Unknown bridge height within calculated auto-guidance route**—(BlueChart g2 Vision) there is an unknown bridge height within the auto-guidance route.
**User Card Not Found**—user data card transfer. Make sure an SD card is fully inserted.
**Water Speed Sensor not Working**—the water speed sensor is not working properly. Check the wheel for obstructions and check wiring.
**Water Temperature Alarm**—(temperature sensor/transducer) the water temperature has entered or left the user-defined water temperature alarm zone.
**Warning: Auto-guidance route starting position moved due to safe depth settings**—(BlueChart g2 Vision) auto-guidance has calculated the route, but the starting point has been moved to deeper water.
**Warning: Auto-guidance route ending position moved due to safe depth settings**—(BlueChart g2 Vision) auto-guidance has calculated the route, but the end point has been moved to deeper water.
**Waypoint Already Exists**—the named waypoint already exists. Choose another name.
**Waypoint Memory is Full, Can't Create Waypoint**—the User Waypoint memory is full. Erase existing waypoints to make room.
**Weather Service Incompatible. Software Update Required**—an XM weather software update is needed. Contact product support for assistance updating your network.
**Weather Service Lost**—(XM weather) the weather service is no longer communicating. Make sure you have a strong XM signal. Check the network and the XM wiring.
**XM Service Incompatible. Software Update Required**—an XM service software update is needed. Contact product support for assistance updating your network.

# Product Registration

Help us better support you by completing our online registration today! Connect to our Web site at http://my.garmin.com.

Use this area to record the serial number (9-digit number located on the back of the product) in case your product needs service. Keep the original sales receipt, or a photocopy, in a safe place.

Serial Number: ___ ___ ___ ___ ___ ___ ___ ___ ___

## *Contact Garmin*

Contact Garmin if you have any questions while using your unit. In the USA contact Garmin Product Support by phone: (913) 397-8200 or (800) 800-1020, Monday–Friday, 8 AM–5 PM Central Time; or go to www.garmin.com/support/.

In Europe, contact Garmin (Europe) Ltd. at +44 (0) 870.8501241 (outside the UK) or 0808 2380000 (within the UK).

# Caring for the Unit

The case is constructed of high-quality materials and does not require user maintenance, except cleaning.

## *Cleaning the Case*

Clean the unit's outer casing (except for the screen) using a cloth dampened with a mild detergent solution and then wipe dry. Avoid chemical cleaners and solvents that may damage plastic components.

## *Cleaning the Screen*

The unit's lens is coated with a special anti-reflective coating that is sensitive to skin oils, waxes and abrasive cleaners. Cleaners containing ammonia, alcohol, abrasives, or anti-grease detergents will harm the anti-reflective coating. It is important to clean the lens using an eyeglass lens cleaner (that is specified as safe for anti-reflective coatings) and a clean, lint-free cloth.

## *Water Immersion*

The unit is waterproof to IEC Standard 60529 IPX7. It can withstand immersion in 1 meter of water for 30 minutes. Prolonged submersion can cause damage to the unit. After submersion, be certain to wipe and air dry the unit before reuse.

# NMEA 0183 and NMEA 2000

The GPSMAP 4000 series unit can accept data from both NMEA 0183 compliant devices and certain NMEA 2000 devices connected to an existing NMEA 2000 network on your boat.

## *NMEA 0183*

The NMEA 0183 data cable included with the GPSMAP 4000/5000 series chartplotter supports the NMEA 0183 standard, which is used to wire various NMEA 0183-compliant devices, such as VHF radios, NMEA instruments, autopilots, wind sensors, or heading sensors.

The GPSMAP 4000 series unit can receive data from up to four NMEA 0183-compliant devices and send GPS data to up to six NMEA 0183-compliant devices.

To wire the GPSMAP 4000 series unit to optional NMEA 0183-compliant devices, see the GPSMAP 4000/5000 series installation instructions.

### Approved NMEA 0183 sentences:

GPBWC, GPRMC, GPGGA, GPGSA, GPGSV, GPGLL, GPBOD, GPRMB, GPRTE, GPVTG, GPWPL, GPXTE, and Garmin proprietary sentences—PGRME, PGRMM, and PGRMZ.

This unit also includes support for the WPL sentence, DSC, and sonar NMEA 0183 input with support for the DPT (depth) or DBT, MTW (water temp), and VHW (water temp, speed, and heading) sentences.

**NOTE:** To configure how the unit sees these NMEA 0183 sentences, see page 36.

## *NMEA 2000*

The GPSMAP 4000/5000 series unit is NMEA 2000 certified, and can receive data from a NMEA 2000 network installed on the boat to show engine specific information on the Gauges section of the Information screen. Also, the unit can receive heading data from a heading sensor connected to an installed NMEA 2000 network.

To connect the GPSMAP 4000 series unit to an existing NMEA 2000 network, see the GPSMAP 4000/5000 series installation instructions.

### NMEA 2000 PGN information

The GPSMAP 4000/5000 series unit accepts the following PGN information from a NMEA 2000 network:

059392 = ISO acknowledgement

059904 = ISO request

060928 = ISO address Claim

126996 = Product information

127250 = Vessel heading

127488 = Engine parameters, rapid update (up to four engines)

127489 = Engine parameters, dynamic (up to four engines)

127505 = Fluid level (0X00 fuel - does not support other fluid types)

All GPSMAP 4000/5000 series units are NMEA 2000 certified.

## FCC Compliance

This product has been tested and found to comply with Part 15 of the FCC interference limits for Class B digital devices FOR HOME OR OFFICE USE. These limits are designed to provide more reasonable protection against harmful interference in a residential installation, and are more stringent than "outdoor" requirements.

Operation of this device is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses, and can radiate radio frequency energy and may cause harmful interference to radio communications if not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet that is on a different circuit from the GPS unit.
- Consult the dealer or an experienced radio/TV technician for help.

This product does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.

## Industry Canada Compliance

Category I radiocommunication devices comply with Industry Canada Standard RSS-210. Category II radiocommunication devices comply with Industry Canada Standard RSS-310.

## Declaration of Conformity (DoC)

Hereby, Garmin, declares that this unit is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

To view the full Declaration of Conformity, see the Garmin Web site for your Garmin product: www.garmin.com/products/. Click **Manuals**, and then select the **Declaration of Conformity** link.

# Limited Warranty

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alteration or repairs.

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IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you. Garmin retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, contact your local Garmin authorized dealer or call Garmin Product Support for shipping instructions and an RMA tracking number. Securely pack the unit and a copy of the original sales receipt, which is required as the proof of purchase for warranty repairs. Write the tracking number clearly on the outside of the package. Send the unit, freight charges prepaid, to any Garmin warranty service station.

**Online Auction Purchases:** Products sold through online auctions are not eligible for rebates or other special offers from Garmin. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

**International Purchases:** A separate warranty is provided by international distributors for units purchased outside the United States. This warranty is provided by the local in-country distributor and this distributor provides local service for your unit. Distributor warranties are only valid in the area of intended distribution. Units purchased in the United States or Canada must be returned to the Garmin service center in the United Kingdom, the United States, Canada, or Taiwan for service.

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